

CHINA.

IMPERIAL MARITIME CUSTOMS.

II.—SPECIAL SERIES: No. 2.

MEDICAL REPORTS,

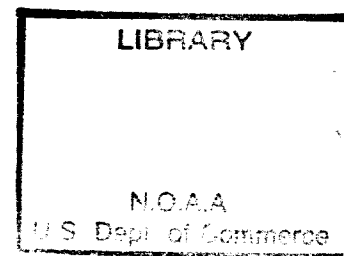
FOR THE HALF-YEAR ENDED 31ST MARCH, 1879.

17th Issue.

PUBLISHED BY ORDER OF

The Inspector General of Customs.

**SHANGHAI:
STATISTICAL DEPARTMENT
OF THE
INSPECTORATE GENERAL.
MDCCCLXXIX.**



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National Oceanic and Atmospheric Administration

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INSPECTOR GENERAL'S Circular No. 19 of 1870.

INSPECTORATE GENERAL OF CUSTOMS,

PEKING, 31st December 1870.

SIR,

1.—It has been suggested to me that it would be well to take advantage of the circumstances in which the Customs Establishment is placed, to procure information with regard to disease amongst foreigners and natives in China; and I have, in consequence, come to the resolution of publishing half-yearly in collected form all that may be obtainable. If carried out to the extent hoped for, the scheme may prove highly useful to the medical profession both in China and at home, and to the public generally. I therefore look with confidence to the co-operation of the Customs Medical Officer at your port, and rely on his assisting me in this matter by framing a half-yearly report containing the result of his observations at.....upon the local peculiarities of disease, and upon diseases rarely or never encountered out of China. The facts brought forward and the opinions expressed will be arranged and published either with or without the name of the physician responsible for them, just as he may desire.

2.—The suggestions of the Customs Medical Officers at the various ports as to the points which it would be well to have especially elucidated, will be of great value in the framing of a form which will save trouble to those members of the Medical profession, whether connected with the Customs or not, who will join in carrying out the plan proposed. Meanwhile I would particularly invite attention to—

a.—The general health of.....during the period reported on; the death rate amongst foreigners; and, as far as possible, a classification of the causes of death.

b.—Diseases prevalent at.....

c.—General type of disease; peculiarities and complications encountered; special treatment demanded.

d.—Relation of disease to { Season.
Alteration in local conditions—such as drainage, &c.
Alteration in climatic conditions.

e.—Peculiar diseases; especially leprosy.

f.—Epidemics { Absence or presence.
Causes.
Course and treatment.
Fatality.

Other points, of a general or special kind, will naturally suggest themselves to medical men; what I have above called attention to will serve to fix the general scope of the undertaking. I have committed to Dr. Alex. JAMIESON, of Shanghai, the charge of arranging the reports for publication, so that they may be made available in a convenient form.

3.—Considering the number of places at which the Customs Inspectorate has established offices, the thousands of miles north and south and east and west over which these offices are scattered, the varieties of climate, and the peculiar conditions to which, under such different circumstances, life and health are subjected, I believe the Inspectorate, aided by its Medical Officers, can do good service in the general interest in the direction indicated; and, as already stated, I rely with confidence on the support and assistance of the Medical Officer at each port in the furtherance and perfecting of this scheme. You will hand a copy of this Circular to Dr., and request him, in my name, to hand to you in future, for transmission to myself, half-yearly reports of the kind required, for the half-years ending 31st March and 30th September—that is, for the Winter and Summer seasons.

4.—

* * * * *

I am, &c.,

(signed)

ROBERT HART,

I. G.

THE COMMISSIONERS OF CUSTOMS,—*Newchwang, Ningpo,*
Tientsin, Foochow,
Chefoo, Tamsui,
Hankow, Takow,
Kiukiang, Amoy,
Chinkiang, Swatow, and
Shanghai, Canton.

SHANGHAI, 1st June 1879.

SIR,

IN accordance with the directions of your despatch No. 6 A (Returns Series) of the 24th June 1871, I now forward to the Statistical Department of the Inspectorate General of Customs, the following documents:—

- A.—Reports on the Health of Kiukiang, for the two years ended respectively 31st March 1878, and 31st March 1879, pp. 1-5.
- B.—Report on the Health of Ningpo, pp. 6-7;
- C.—Report on the Health of Newchwang, pp. 8-13; each of these referring to the year ended 31st March 1879.
- D.—Report on the Health of Chefoo, pp. 14-16;
- E.—Report on the Health of Shanghai, pp. 17-32; each of these referring to the half-year ended 31st March 1879.
- F.—Report on the Health of Tientsin, for the year ended 31st March 1879, pp. 33-35.

I have the honour to be,

SIR,

Your obedient Servant,

R. ALEX. JAMIESON.

THE INSPECTOR GENERAL OF CUSTOMS,
Peking.

The Contributors to this Volume are—

J. JARDINE, M.D., CH.M.	Kiukiang.
J. H. MACKENZIE, M.D.	Ningpo.
James WATSON, M.D., L.R.C.S.E.	Newchwang.
J. G. BRERETON, L.K.&Q.C.P., L.R.C.S.I.	Chefoo.
R. A. JAMIESON, M.A., M.D., M.R.C.S.	Shanghai.
A. IRWIN, L.K.&Q.C.P., L.R.C.S.I.	Tientsin.

A.—Dr. J. JARDINE'S Reports on the Health of Kiukiang for the Two Years ended respectively 31st March 1878, and 31st March 1879.

I.—Year ended 31st March 1878.

DURING the above period the health of the foreign community was so exceptionally good that only scanty material is available for a report. There was one death among residents from chronic alcoholism, and one afloat from sunstroke. The latter case occurred on board H.M.S. *Midge* on the 22nd July at about 3.45 P.M. The highest temperature registered ashore on that date was 93° in the shade, but the day was very oppressive and sultry. The patient, who "had not had a day's health since he joined the ship," had been at the forenoon church service on shore. In the afternoon he was found comatose on deck with his lower extremities in the direct rays of the sun, and the upper portion of his body protected by the awnings. How long he had remained in this condition before he was observed could not be exactly ascertained, but it was supposed to be only for a short period. Ice was promptly applied to his head, and his body well douched with the hose, but the patient could not be roused, nor was he ever observed to move a voluntary muscle. He died at 3 A.M. next day. His breathing in the course of two hours became so stertorous that he could be heard over the concession until midnight. Other remedies were tried, such as blisters to the nape of the neck, ammonia to the nostrils, cold sponging and fanning, but without the slightest sign of improvement. Indeed the ammonia seemed to do harm by making the breathing more stertorous.

Nothing of importance was discovered at the *postmortem* held next day. The blood was unusually fluid, the brain was œdematous, and there was a superabundance of serum in the ventricles.

The following case of poisoning by an over-dose of santonin illustrates forcibly the well known adage that "a little knowledge is a dangerous thing," and may serve as a wholesome warning to many who are inclined to dabble in physic.

A native girl, aged seven, an inmate of one of the schools conducted under foreign auspices, complained of symptoms that were interpreted to point to intestinal worms. Accordingly, half a teaspoonful of santonin was administered in one dose early in the morning. For half an hour she appeared quite well, but she then suddenly fell down in a fit, became insensible, foamed at the mouth, with livid face and stertorous breathing. Fortunately at this moment she vomited freely, and she was placed by her attendants in a warm bath in which she regained consciousness. I saw her soon after, and it was only after careful cross-examination that I elicited the information about the santonin which the person who administered it had supposed to be a harmless remedy. A smart purge was ordered and the patient was well in the afternoon of the same day. The timely vomiting probably saved this child's life.

Santonin even in small medicinal doses is sometimes capricious in its action, so that care should always be taken in its administration. A number of cases have been from time to time recorded in the various British and foreign journals, where doses of six grains and under have been attended with most alarming symptoms.*

For the following Meteorological Table I am indebted to Mr. MOOREHEAD, the Harbour Master:—

MONTHS.	THERMOMETER.			Rain.	Days on which Rain fell.	MONTHS.	THERMOMETER.			Rain.	Days on which Rain fell.
	Highest.	Lowest.	Average.				Highest.	Lowest.	Average.		
1877.	°	°	°	Inches.		1877.	°	°	°	Inches.	
April.....	86	56	64	4 $\frac{7}{10}$	10	October	83	51	65	...	...
May	86	65	79	3 $\frac{3}{10}$	6	November.....	73	40	52	7 $\frac{5}{10}$	11
June.....	94	70	83	2 $\frac{1}{10}$	5	December.....	53	30	42	1 $\frac{1}{10}$	6
July	95	72	85	10	7	1878.					
August	92	70	82	12 $\frac{1}{10}$	9	January.....	58	14	31	1 $\frac{6}{10}$	2
September.....	84	70	78	3	4	February.....	57	28	40	3 $\frac{3}{10}$	8
						March.....	78	41	55	2 $\frac{1}{10}$	8

II.—Year ended 31st March 1879.

DURING the summer of 1878, a flood, lasting from the 21st July to the 17th September, overflowed the low-lying country adjacent to Kiukiang for many miles in nearly every direction, and compelled a number of refugees to seek shelter wherever they could find it. Large numbers accordingly flocked into this city and neighbourhood. The city walls and the numerous unoccupied magazine-houses on its top afforded excellent accommodation for a large number, while others less fortunate were glad to erect mat-huts as temporary residences. The flood had deprived most of them of nearly all their worldly substance, and they were consequently in a state of destitution. Typhus fever broke out among them, of which a few died; and, had it not been for the prompt and laudable relief furnished to the famishing by the native authorities in dealing out to them daily supplies of rice and other necessities, not only typhus but other diseases that infest the destitute might have attacked them. The opportune relief supplied to the distressed was sufficient to limit the spreading of the disease beyond the refugees; and, the water at last subsiding, the people quietly dispersed to their desolated homes.

* Samples of santonin have in some instances been found adulterated with strychnia.

Among foreign residents an unusual amount of sickness prevailed, for which I am unable to account satisfactorily. The summer was it is true longer than any of the preceding four, but the heat was moderate. Possibly the unusual length of the close sultry weather combined with the depressing influence of the flood may to a certain extent explain this increase, as many complained bitterly of the malaise caused by the continuance of the heat. Not only were diarrhœa, fever and many minor climatic ailments prevalent in an unusual degree, but several severe cases of sickness, causing considerable anxiety for some time, were encountered, all of which happily recovered. Strange to say all the serious cases occurred among the members of the Customs staff or in their families.

They were as follows:—

Acute nephritis	1 Case.
„ dysentery	1 „
Perihepatitis	1 „
Typhoid fever	1 „
Severe hæmorrhage	1 „

1. *Acute nephritis*:—This was probably excited by cold in a patient who had suffered from obstinate stricture of the urethra consequent on a long-continued gonorrhœa. Perfect rest, simple diluents, fomentations, dry cupping, and vigorous counterirritation were used with good results during a long and trying sickness attacking a patient of weak physique.

2. *Dysentery*:—Here, ipecacuanha after repeated trials could not be tolerated by the stomach, but Dover's powder and opiate enemata proved most satisfactory substitutes.

3. *Perihepatitis and hepatitis* attacked a patient who had been suffering during the summer from subacute and chronic dysentery. He was seized with a severe cutting stitch in the right side of the epigastrium, aggravated by pressure, inspiration or movement, and accompanied by a deal of febrile excitement. The right lobe of the liver became enlarged and exquisitely tender. The inflammation then extended to the pleura of the right side at the base. Ipecacuanha, Dover's powder, muriate of ammonia in large doses, dry cupping, active counterirritation and bland diet were the chief therapeutical agents used.

4. *Typhoid fever*:—This is the first case that has occurred here during the last five years, the sanitary arrangements of the concession, with some exceptions, being in a fairly satisfactory state. The disease in this patient was supposed to be due to the use of milk diluted with stagnant water, as supplied by a milkman. One other member of the family drank of the same milk, but vomited freely immediately after it was swallowed. The case was pretty severe, as will be seen on reference to the appended chart, the pulse being weak and quick and the heart irritable during the first three weeks, but the use of the tepid bath or cold sponging whenever the temperature exceeded 104°, and the free administration of stimulants and nourishment were productive of excellent results.

After a tolerably extensive and successful experience of the treatment of this disease at home, I can strongly urge the feeding of patients, the tepid bath, wet sheet or cold sponging whenever the temperature reaches 104°, a free supply of alcohol when the heart gets irritable and weak and the second sound begins to fail, and the rational treatment of symptoms and complications as they arise.

DAY.....	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.	M. E.
E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.	E.
Pulse { M. — E. —	—	—	112 108	108 108	108 108	112 120	108 112	108 120	108 112	108 120	108 112	96 108	90 108	108 108	96 108	96 108	108 96	96 108	96 108	84 96	78 96	66 84	78 84
Resp. { M. — E. —	—	—	30 32	34 34	36 32	32 34	32 34	32 32	32 32	32 32	32 32	34 34	32 34	30 30	30 30	28 30	28 28	28 28	26 28	24 26	22 24	20 20	18 20

* These interesting cases do not appear to have been complicated by native interference. Compare with that detailed and others referred to on a subsequent page.

arm. For some time could not deliver the body though great force was used; had resolved to eviscerate, but determined before operating to give traction one more chance. With a towel round the head and neck in one hand and drawing on the arm with the other, delivery was effected, the perinæum being supported. The abdomen of the child was immensely distended with fluid which was the cause of the dystocia. The mother suffered from valvular disease of the heart, but was relieved by digitalis, and she made a capital recovery.

3°. Æt. 22; first pregnancy; head, which was dislocated at the neck when first seen, had been delivered for 12 hours, but the body refused to follow. Careful examination failed to discover the cause of the delay. Passages of normal dimensions. Traction failing I removed the head, returned the body and performed version. Delivery was easy as far as abdomen, but the thorax and shoulders refused to emerge. Eviscerated, but though the thorax collapsed the left shoulder would not advance until forcible traction was applied. The difficulty arose from an immense cystic tumour of the left shoulder and arm larger than the child itself. This case puzzled me much as to whether I had a tumour or two children conjoined to deal with. Inflammatory complications unfortunately set in next day, and the patient died on the third day after delivery.

For the following Meteorological Table I am indebted to Mr. MOOREHEAD:—

MONTHS.	THERMOMETER.			Rain.	Days on which Rain fell.	MONTHS.	THERMOMETER.			Rain.	Days on which Rain fell.
	Highest.	Lowest.	Average.				Highest.	Lowest.	Average.		
1878.	°	°	°	Inches.		1878.	°	°	°	Inches.	
April.....	84	46	61	13 $\frac{5}{10}$	16	October	94	52	67	6 $\frac{1}{8}$	12
May	90	62	78	4 $\frac{3}{10}$	10	November	64	44	56	6 $\frac{1}{8}$	5
June	91	72	81	11 $\frac{1}{10}$	9	December	64	29	45	2 $\frac{1}{8}$	6
July	96	76	87	6 $\frac{1}{10}$	8	1879.					
August.....	93	75	86	3 $\frac{6}{10}$	7	January	57	25	40	1 $\frac{1}{10}$	4
September.....	89	74	81	1 $\frac{1}{10}$	3	February.....	70	31	47	1 $\frac{1}{8}$	6
						March	76	30	50	3 $\frac{1}{8}$	9

B.—Dr. J. H. MACKENZIE'S Report on the Health of Ningpo for the Year
ended 31st March 1879.

THE health of foreigners in Ningpo during the past year compares favourably with past years, but among natives the death rate was larger than usual owing to an epidemic of cholera. Among foreigners one case occurred, which fortunately was attended to in time, and recovery took place in three days, although the patient felt much prostrated for a considerable period afterwards.

Diarrhœa as usual heads the list, seconded by dyspepsia, and a greater number of rheumatic cases presented themselves than I have been accustomed to see in Ningpo. Intermittent fever was not so frequent, although most complaints exhibited an intermittent character. Gonorrhœa was not prevalent; and in most cases I found that a saturated solution of boracic acid, used as an injection, effected a rapid cure. Hæmorrhoidal affections were not uncommon, but in only two cases did I consider surgical interference necessary, and in both cases I removed by carbolized ligature considerable masses to the great relief of the sufferers.

The treatment pursued in the case of cholera referred to consisted in the administration of small doses of spirit of camphor every 15 or 20 minutes and a few doses of chlorodyne, with hot water bottles to the feet and arm-pits and constant rubbing till all cramps ceased. In diarrhœa I found the oxide of zinc most beneficial in doses of 20 grs. every 4 hours for adults, and 4 to 6 grs. for children. In fact, in all the cases with one exception in which I used the oxide of zinc recovery followed.

In every case of rheumatism that came under my notice I ordered salicylate of soda, and in two out of the number it proved ineffectual, while large doses of iodide and bromide of potassium seemed to give almost immediate relief, and effected a cure in from 4 to 6 days. In neither of these cases could I trace any syphilitic taint, and both were temperate men.

The temperature has been most variable throughout the year and the summer was a trying one, but as the instruments at the Custom House are unreliable, I do not give a table. The lowest temperature registered by a Negretti and Zambra's self-registering minimum thermometer in my own house was 18° F. During the latter end of March the highest temperature in the shade was 85°, while three days after, 45° was registered by the same instrument in the same place.

The epidemic of cholera and an out-break of cattle disease were contemporaneous, but what connection, if any, existed between the two remains to be seen. During last September and October rumours were abroad that there was a great deal of disease among horned cattle. Dr. THIN, late of Shanghai, seems to have been one of the earliest, if not the earliest, to observe the disease in Shanghai. In a letter addressed by him to the *North-China Daily News* of 21st October 1868, he says that the Chinese call it *Ma Ping*. On the 4th December of the same year Dr. E.

HENDERSON, also of Shanghai, published the results of his investigations, and among the symptoms he enumerates an appearance of great lassitude and increasing weakness, evidenced by listless movements, low carriage of head, depression of ears, staring condition of coat, refusal to take food, discontinuance of chewing the cud, accelerated pulse, diarrhœa as the disease progressed, restlessness indicative of pain probably abdominal, and laboured breathing. The above description quite agrees with the symptoms presented by some animals that I saw at a native slaughter-house in the vicinity of Ningpo last September and October; but I believe the disease prevailed to a great extent before then, and many hundreds of animals died of it in and around Ningpo. No opportunity offered for *postmortem* examination. This part of the subject was however carefully worked out by Dr. HENDERSON, whose paper on Steppe Murrain will be found in the 3rd volume of these Reports.

I hear that the disease has again broken out with great virulence in this district.

C.—Dr. James WATSON's Report on the Health of Newchwang for the
Year ended 31st March 1879.

I HAVE in so many former papers discussed the climate of this district that I will on the present occasion allow the Meteorological Tables (which with the kind assistance of Mr. DEIGHTON-BRAYSHER I am able to furnish) to speak for themselves. They are sufficiently full when taken in connection with former records of the seasons, and tell all that is really required for these Reports.

In neither the summer nor winter months was there much sickness among the foreign residents or the Chinese. The natives enjoyed a prosperous business year; and the mass of the people found constant employment, and were thus able to supply all their simple wants. The poverty of recent years, however, created a large number of professional beggars, and some of these continued to follow their trade in the foreign settlement. But they have now nearly ceased to annoy foreigners by exposing their sores or by piteous entreaties for alms. Indeed the natives not only find constant employment, but, as foreigners know to their cost, they demand and receive a much higher rate of wages than they obtained a few years ago. Yet in spite of this prosperous condition, a large number of Chinese female children have been allowed to die in the streets neighbouring to the settlement, and for some reason which I cannot discover, a great many women have recently committed suicide by means of opium. But the people as a whole have during the last year been not only well off but eminently free from serious sickness. They have been well fed, moderately worked, and, living as they do a simple life in a good climate, have been healthy.

During summer, simple diarrhœa was common amongst the foreign residents. There is no doubt that one cause of this ailment here is, that almost all the drinking water is obtained from surface ponds, and that it is too frequently used without being boiled and filtered. Situated as this settlement is on the bank of a great river, with only a few towns, and those of inconsiderable size, built on its higher reaches, it would be a matter of little difficulty to obtain ample supplies of pure water if the foreign community was a large one; but as the Chinese will not undertake the necessary works for their own benefit, it is impossible for the few foreigners to do so. They have to content themselves therefore by taking water from the ponds above referred to, or by sending a few miles into the country where good springs are to be found, or by using the water from the river. The first source is generally availed of because, though it is the worst, it is at hand, and those who suffer from the effects of bad water persuade themselves that there is some other cause for their ailments; the second source is neglected, as the servants persist in getting water nearer home, while they assert that it is drawn from the springs; and the third source is abandoned as the water so obtained is salt whenever it is taken near the settlement at flood tide. Besides, in those seasons when we have one or two days of heavy rain, the ponds supply water not manifestly bad, and the evil effects which often follow as the ponds become nearly empty, are not always recognised, or, as before remarked, are explained away on some other theory.

I have on a former occasion drawn attention to the prevalence of tapeworm among the Chinese and its occasional occurrence among foreigners. There can be little doubt that the unsatisfactory character of our drinking water is in a great measure responsible for this. The beef and mutton provided for the foreign settlement are usually above suspicion, but the pork which enters into the dietary of all Chinese is not so satisfactory. Here as elsewhere the pig is the general scavenger, and in this capacity eats and drinks every conceivable abomination. Pork as well as impure water is in all likelihood a cause of tapeworm among Chinese. The reflex symptoms supposed to indicate the presence of tapeworm in the alimentary canal are so numerous that many physicians ignore them and do not treat the disease until portions of the parasite have been voided. I have treated some hundreds of cases, and generally speaking the symptoms have been far from severe. The feeling of disgust which Europeans experience on becoming aware that they are inhabited by so formidable a creature is the most distressing feature of the case, but there are exceptions to this rule, of which the following is an instance :—

A. B., æt. 30, active, and apparently a perfectly healthy man, complained that for some months he had suffered frequently from severe colic immediately after he commenced to eat, and that although he took sufficient food and generally felt fairly well, he was conscious of having less strength and energy than formerly. Attacks of colic were so severe as to produce faintness, for which he took brandy, but the pain yielded only to firm friction over the spine. While each fit lasted his agony was such that his skin was bathed in a cold sweat. He was not costive nor flatulent; he digested his food well, and his tongue was clean or but slightly furred. Suspecting the presence of intestinal worms I prescribed purgatives which only increased the stools and in no way relieved the painful symptoms which became more and more distressing. No portions of tapeworm were passed for several weeks, although they were constantly looked for. My patient became weaker and more anxious, and life was almost a burden to him. Under these circumstances it was necessary to prescribe morphia and chloroform to relieve the pain and depression which became more and more aggravated. One day, however, immediately after a meal and a severe attack of colic, his bowels moved and he passed a cast about 2 feet long of a portion of the small intestine, which was closed at one end and contained an immense portion of a large tapeworm. For several weeks afterwards long ribbon-like portions of mucus membrane, measuring from 8 to 18 inches long, were thrown off; but from the day when the first portion of the tapeworm was passed my patient was absolutely free from colic. He continued weak, however, for many months, and even now after an interval of several years he believes he has not recovered the strength and energy he enjoyed before he was troubled by tapeworm.

I have tried many anthelmintics, but for the purpose of destroying and expelling tapeworm I have lately restricted myself to turpentine and oil of male fern. Both are admirable though disagreeable to take. Unfortunately the capsules in which the oil of male fern is now enclosed occasionally pass along the alimentary canal undissolved. Although I have prescribed turpentine some fifty times for the destruction of tapeworm, I have only once seen it induce any bad effects. In this case there were slight intoxication and strangury, both of which soon passed off. Whatever anthelmintic is used must be repeated three or four times at short intervals. In the after treatment of patients who have been troubled with tapeworm I am in the habit of prescribing a draught of the sulphates of magnesia, iron and quinine with sulphuric acid in a bitter infusion, to be taken the first thing in the morning for several weeks, unless it should act too distinctly as a purgative. A carbonate of iron pill taken in addition after each meal rapidly improves the digestive system and general health.

A case of acute urticaria due to gastric irritation occurred last winter in my practice, the point of interest of which consists in the fact that not only were the symptoms very urgent—the fever running high and continuing so for several days—but that for some years past the patient has had an attack every winter.

The last was preceded by greatly impaired digestion, the tongue was thickly loaded over its entire surface, there was pain in the bowels, breath foul, nausea and great thirst. The rash covered the body completely, and there were large patches of wheals thickly scattered over the trunk and limbs. During the fever the patient was several times delirious, and for two or three days was apprehensive of death. Emetics and purgatives were freely used with good effect, and the warm bath, in which a little carbonate of soda was dissolved, was very soothing. Carbolic oil applied to the skin at night relieved the burning and itching, and permitted sleep. It was some ten days before the fever and eruption had entirely disappeared, and as many more before the digestive system and general health were in good condition, a result which followed a course of stomachics and general tonics.

It is somewhat remarkable that, in a climate such as this neighbourhood enjoys, where we have in the summer for two months very hot weather, and in the winter five months of great cold, and in both seasons sudden changes of temperature, neuralgia should comparatively speaking be rare. This immunity is partly explained by the dryness of the air and by the fact that foreigners who venture to settle so far north are as a rule of robust constitutions. Last winter was, however, exceptionally wet and windy; and for many weeks the ground was covered with snow. To this I attribute the occurrence of a considerable number of cases of neuralgia. The majority were associated with decayed teeth, the most frequent exciting cause of facial neuralgia. None were very severe; and I refer to the subject chiefly for the purpose of introducing a case of some interest which occurred in my practice a few years ago:—

C. D., aged about 40, had suffered from general neuralgia of the head and face before coming to reside with her husband in this settlement. It was evidently due to anæmia. I prescribed tonics of various kinds, amongst others the different preparations of iron in such doses as the stomach would tolerate. Little or no relief was obtained from this treatment, which included a generous diet and great attention to clothing. Narcotics both local and internal were constantly required to allay pain and secure sleep. Those most frequently used were opium and chloroform, which always gave partial and temporary relief. The disease showed no signs of abatement, and as the doses of morphia required were in too frequent demand, and were necessarily increasing in strength, I changed the narcotic and prescribed a pill containing one grain and a half of extract of cannabis indica. This pill was taken at 4 P.M. At 5.30 the patient was heavy and sleepy, but at 6 was able to eat a light meal. Immediately after this she became giddy and complained of a mist before her eyes, and faintness. Her whole body soon became numb, so that she was conscious of no feeling except that of dryness of the tongue and throat. She also lost or fancied that she had lost the power of speaking. At 6.45 I saw her, when she was in a state of great mental excitement. Her heart was acting irregularly, the skin was moist, she could stand only when supported, and her general demeanour was that of a person fully under the influence of alcohol. She constantly cried out "I cannot speak, I cannot speak," which, however, for the space of half an hour she did with the greatest volubility. By 8 o'clock, after an emetic, followed by a draught of tea, the stage of excitement was in a great measure over and was succeeded by drowsiness. She slept soundly until morning, and though she complained during the day of numbness, and dryness of the throat and tongue, these symptoms passed completely away before night.

The after effects were entirely satisfactory. For years subsequently neuralgia rarely troubled her, and when it did the attacks were mild compared with those she had been accustomed to. Anæmia gradually diminished, and the tonics, which up to this time seemed to have little if any beneficial effect, now produced the result desired, or at all events their use was followed by improved general health.

As the effect produced in this case by a moderate dose of hemp was unusually severe, I was glad to have soon afterwards an opportunity of testing the action of the same preparation on two friends who were desirous to experience the sensations of hachish smokers.

At 5.30 P.M. each of these gentlemen took 3 grains; at 7 and 8.35, doses of $1\frac{1}{2}$ grain, and at 9.50 and 11.45 doses of 2 grains, or in all 10 grains within about 6 hours. Soon after the third dose both experimenters became slightly but pleasantly excited, with this qualification that, dinner having meanwhile been served, one of them was under the impression that there was too little food provided to satisfy his appetite, which was by no means difficult under ordinary circumstances to appease. Soon after the last dose the narcotic effects were manifested, and sleep proved irresistible about 1.30 A.M. Next day they were able to attend to their respective duties, although the drowsiness induced by the drug still clung to them.

I find amongst my notes a curious case of poisoning by a minute dose of the castor oil seed (*Ricinus Communis*) which is worth recording.

Some years ago, on the 10th of June, I was sent for to see a patient who fancied he was dying of cholera. His symptoms were sufficiently alarming, and of a kind to justify his fears, but it was evident to me that he was suffering from the effect of an irritant poison. He had in fact an hour previously idly picked up a castor oil seed, under the impression that it was a bean, and had chewed and swallowed about half of it. Five minutes afterwards he suffered from a burning sensation in the throat, which extended along the whole alimentary canal, even to the anus. A few minutes later severe vomiting and diarrhœa set in, which rapidly reduced him to a very prostrate condition. Steam inhalations, with morphia and brandy internally, and mustard poultices, gave relief within an hour or so, but for two or three days the patient was weak, his digestion deranged, and he complained of dull aching which extended from one end of the bowel to the other.

The interesting features of this case are the smallness of the dose which produced such severe symptoms and the rapidity with which the poison acted on a strong man in perfect health. In TAYLOR'S *Principles and Practice of Medical Jurisprudence* it is reported* that three sisters were poisoned by castor oil seeds. They took respectively "about twenty," "four or five," and "two" seeds. The first died, the other two recovered; but in none of the cases did the symptoms of poisoning occur until five hours after eating the seeds.

One case of cholera occurred on board a steamer in port. The patient was a Chinaman, a native of Shanghai. The symptoms were somewhat severe, but he made a good recovery in the course of a week.

Three births took place during the year, and the following deaths have been recorded:—One from old age, 73, (indigestion, gravel, eczema); one from tubercle of bowels and lungs, age 45; and one from puerperal peritonitis (gastro enteric fever), age 34.

* 2nd edition i. 328.

METEOROLOGICAL TABLE for the Half-year ended 30th September 1878.

MONTH.	No. of days on which temperature fell below 20°.	No. of days on which temperature fell below 32°.	No. of days on which temperature fell below 42°.	No. of days on which temperature was above 65°.	No. of days on which temperature was above 70°.	No. of days on which temperature was above 75°.	No. of days on which temperature was above 80°.	No. of days on which temperature was above 85°.	No. of days on which temperature was above 90°.	No. of days on which rain fell for upwards of 2 hours in the 24.	No. of days on which snow fell for upwards of 2 hours in the 24.	Highest reading of aneroid Barometer, for the month in inches.	Lowest reading of aneroid Barometer, for the month in inches.	No. of days on which high winds occurred for a longer period than 2 hours in the 24.	No. of days on which thunder storms occurred.	No. of days on which no rain or snow fell.
April.....	...	3	16	6	...	...	...	...	...	4	1	30°60	29°69	5	...	25
May.....	3	12	3	...	...	...	...	8	...	30°34	29°51	3	3	23
June.....	30	30	22	8	2	...	6	...	30°12	29°53	2	5	24
July.....	31	31	29	25	14	...	12	...	30°00	29°60	1	8	19
August..	31	31	28	22	13	...	7	...	30°13	29°60	2	7	23
Sept.	27	20	13	4	1	...	5	...	30°30	29°86	4	4	24

REMARKS:—*Barometer*.—The Barometrical pressure corresponded generally with that of corresponding months in the last eight years, with the exception of 1875 when the lowest reading was 29°60 inches. In many instances the fall occurs without any perceptible signs of change in the weather; as in the month of May last when a gentle southerly breeze was blowing; and in June, with a moderate westerly wind and fine clear weather.

Thermometer.—Many days in July and August were extremely oppressive, owing to the humidity of the air, and this when the Thermometer showed only the ordinary range for the season, having risen but once to 90°.

Rain.—The fall of rain was unusual in amount, as well as the number of Thunder-storms and the amount of electricity in the air.

Winds.—The prevailing winds may be noted thus:—April, fresh and variable. May, moderate southerly breezes, with rain. June, light S.W. winds and fine. July, light S.W. airs, with thunder, lightning and much rain. August, moderate S.E. and S.W. winds with thunder-storms. September, fresh, and blowing from N.E. to S.W., a strong gale prevailing for some days in the last week.

The immunity from dust-storms was remarkable, not one having occurred in the months above named.

METEOROLOGICAL TABLE for the Half-year ended 31st March 1879.

MONTH.	No. of days on which temperature fell below zero.	No. of days on which temperature fell below 10°.	No. of days on which temperature fell below 20°.	No. of days on which temperature fell below 32°.	No. of days on which temperature fell below 42°.	No. of days on which temperature was above 65°.	No. of days on which temperature was above 70°.	No. of days on which rain fell for upwards of 2 hours in the 24.	No. of days on which snow fell for upwards of 2 hours in the 24.	Highest reading of aneroid Barometer, for the month in inches.	Lowest reading of aneroid Barometer, for the month in inches.	No. of days on which high winds occurred for a longer period than 2 hours in the 24.	No. of days on which thunder storms occurred.	No. of days on which no rain or snow fell.	No. of local dust-storms.
1878, October...	...	...	...	4	15	4	2	5	1	30°58	29°86	2	...	23	...
" November	...	2	13	26	27	...	...	2	2	30°90	29°98	3	1	25	...
" December	2	21	26	30	31	...	...	...	2	30°87	29°86	...	...	29	...
1879, January ..	7	18	27	31	31	...	...	...	4	30°90	30°18	3	...	26	...
" February	3	9	26	28	28	...	...	...	4	30°86	30°09	5	...	22	...
" March .....	...	6	12	27	31	...	...	...	3	30°67	29°77	3	...	27	1

REMARKS:—During October the early mornings were very chilly; the mercury fell below freezing-point four times. There were fewer high winds than is usual at that time of the year. In November, too, the thermometer showed a much lower range than is generally experienced in that month. There was more moisture both of snow and rain, and a thunder-storm passed over us—a very unusual occurrence so late in the season. Ice first appeared in the river on the 22nd, but the ponds were frozen over about a fortnight previous. With a fresh N.E. wind, on the 12th December, the river was frozen over for the first time, and people crossed it on foot on the 16th. From the 26th December to the middle of January the weather was exceptionally fine, nor did the thermometer once fall below zero until the 21st of that month. February was colder when compared with last year. The thermometer fell three times below zero, and twenty-six times below 20° (Fahrenheit). The high winds were in excess of previous years in corresponding months, and more snow fell than is usual. In 1878, the ice broke up from Everlasting Point, and the river was open from that place on the 10th March. This year no open water was visible on the 12th, the ice reaching as far as the Bar. A steamer came up to abreast of Flag-staff Beacon on the 21st, but owing to the ice, was obliged to return to Deep Hole. On the 23rd, two junks rounded Everlasting Point, but were compelled to beach on account of the ice. The first steamers anchored off the settlement on the 27th, though a quantity of ice floated with the tide to the end of the month, causing the vessels to frequently shift their berths.

The barometrical readings were taken from an instrument placed about 8 feet above high-water level. The thermometer (Fahrenheit) was hung in a shaded situation facing the north.

D.—Dr. J. G. BRERETON's Report on the Health of Chefoo for the Half-year ended 31st March 1879.

THE winter of 1878-1879 will long be remembered in Chefoo as being accompanied by frequent violent storms, and attended by a number of disasters to ships both in harbour and along the coast line.

No fewer than five total shipwrecks took place on this side of Shantung Promontory, but in only one instance was there any loss of life. In this, the crew, consisting of six Japanese and five Europeans, were exposed during a whole night on a deserted beach, without shelter of any kind, to a piercing north-east wind, and a temperature of about 8° F. One of the Japanese fell into a fatal sleep, and the survivors were severely frost-bitten. They were conveyed to the settlement, where they at once received attention. Their limbs exhibited different degrees of injury from the frost. Some were greatly swollen, œdematous, and covered with large bullæ filled with serum; others had no appearance whatever of injury, but were perfectly cold and devoid of sensation. In the former cases the injury was found to be more superficial, the deeper structures escaping, but in the latter, the parts were frozen to the bone.

The Japanese were dull and apathetic, not seeming to be much interested in their future prospects.

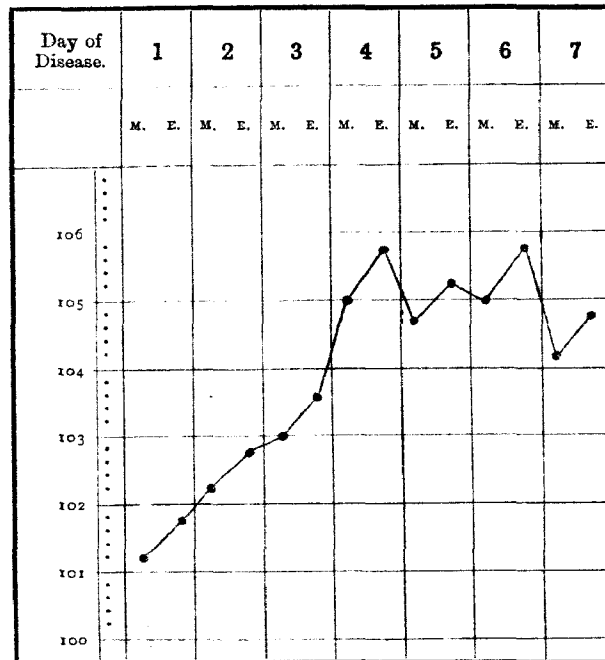
The treatment pursued was the application of hot poultices frequently repeated, which acted most satisfactorily by hastening the separation of sloughs in the more superficial cases, and in those that were more severe by stimulating the sound tissue to throw off the dead parts. Pain when present was relieved by laudanum sprinkled over the poultices, which greatly decreased the demand for narcotics internally. But pain was almost entirely confined to those milder cases where bullæ had formed, being quite absent in the more severe injuries. In most cases constipation was obstinate.

Five deaths occurred in consequence of this shipwreck,—2 Europeans and 3 Japanese. The second mate was drowned in endeavouring to get on shore.

The captain, a robust man about 28 years old, was the only one who on arrival was found to be in high fever, due probably to reaction. The toes, upper surfaces and sides of both feet, were dark and congested, and large bullæ had formed over them. They were œdematous, and this condition extended for a considerable distance up each leg. The hands were also superficially injured,—the right more extensively than the left.

After poulticing for two or three days the œdema and dusky appearance subsided. Large portions of the skin separated from the foot, and were removed. Constipation was obstinate, but was relieved by enemas. Pain was also present, but not sufficient to call for opiates. There was no delirium till the night previous to his death, which took place on the morning of the 7th day after his arrival.

The following chart indicates the course of his temperature:—



In a Japanese seaman who presented rather an anæmic appearance, the feet shewed but little appearance of injury, but they were perfectly cold and devoid of sensation as far as the instep. Above this the tissues were œdematous, and sensibility was impaired as far as the middle of the leg. The hands were also severely injured. On the left nearly all the fingers were dead, and the back of the hand was œdematous. The right was cold and destitute of sensation as far as the wrist, but it could be moved at will, though there was no power of grasping. Poultices were applied locally, and stimulants and tonics internally, but with little result. After 9 days, muttering delirium set in, followed by coma, and death on the 11th day after admission.

In a third case there was considerable œdema of both feet, and large bullæ extended along the base of the toes and sides of feet. After poulticing for a few days the skin came away completely from the sole and heel. Sloughing took place about the base of the toes and sides of feet, where bullæ had formed. After the sloughs separated a clean healthy granulating surface was left which cicatrized rapidly. A good deal of pain was present, but the patient progressed favourably until the 14th day, when the early symptoms of tetanus were observed. Immediate amputation was decided on, and both feet were removed, by CHOPART's operation on one side and by HER's on the other, as much sound tissue as possible being preserved. Before beginning the operation a tourniquet was placed loosely over the femoral, a precaution which subsequently proved valuable. ESMARCH's bandage had been applied, but as soon as the elastic band was released capillary hæmorrhage took place to a very considerable amount. But for the tourniquet the loss of blood would have been very severe. The amputations did not, however, arrest the progress of the tetanus, which proved fatal 4 days later.

The others made good recoveries, after having had some portions of their feet or hands removed.

In one case both feet seemed to be completely frozen. Three fingers of the right hand were similarly affected. After poulticing for 14 days ulceration commenced about the middle of the upper surfaces of both

feet. SYME's operation was resolved on, but the incision across the sole having given exit to a quantity of sanious pus this intention was abandoned, and the parts were removed through the lower third of tibia and fibula by TEALE's method. The other foot was immediately afterwards removed in the same way, inflammation having here also extended farther than appeared. Hæmorrhage was controlled by ESMARCHE's band, carbolized gut was used for ligatures and sutures, and firm support was afforded to the calf of each leg in order that there might be no dragging upon the flaps. The patient was so prostrate after the second operation that nothing was done to the hand; he was then placed in bed, and fed upon strong beef tea. During that night he was very restless, with temperature $105^{\circ}5$; towards morning, however, he slept quietly for a couple of hours. He gradually improved for 4 days, when high fever was noted, and it became necessary to remove the affected fingers on the right hand. This was done on the 5th day after the other operation. On the ensuing night he became delirious, and was kept in bed with some difficulty. A hypodermic injection of $\frac{1}{4}$ gr. of morphia produced some hours' sleep, after which he made an almost uninterrupted recovery. The flaps on the right leg united by first intention, but the anterior skin flap on the left leg sloughed away, but subsequently granulated satisfactorily.

The other operations required were—

1st.—Removal of great toe with head of metatarsal bone, and phalanges of two adjoining toes from left foot.

2nd.—Removal of all the toes from both feet with heads of 1st and 5th metatarsal bones.

3rd.—Removal of great and little toes, with heads of metatarsal bones, and last phalanx of 3rd toe from the right foot; removal of last phalanx of 2nd toe from left foot.

In the first of the above cases, the patient had to be operated twice, as after poulticing, the integument of one toe sloughed more quickly than the others. All constitutional disturbance evidenced by high temperature ($101^{\circ}5$) and quick pulse immediately disappeared upon the removal of the exposed bone.

During the past six months, four cases of severe infectious disease were noted, namely:—Two of diphtheria, one of small-pox, and one of scarlatina anginosa. Both cases of diphtheria proved fatal. The others did well.

The precautions taken and the free use of disinfectants prevented infection spreading from these cases, except in that of small-pox. One of the attendants on the patient, a European, was afterwards attacked, but he was immediately isolated, and only those who had previously had this disease were permitted to attend upon him.

A severe case was observed of anasarca of the lower extremities with considerable ascites, due to emphysema of the lungs and enlargement of the right side of the heart.

The patient, aged about 50 years, had complete orthopnœa, and cyanosis of the face. The abdomen measured at the umbilicus 53 inches. The leg, just below the knee, was 18 inches. He was put upon a mixture of digitalis and squills. Elaterium (gr. $\frac{1}{6}$) pills were also given at intervals, and an occasional vapour bath administered. Within 2 weeks the abdomen measured round the umbilicus 39 inches, and the size of the leg was reduced to 11 inches. During the progress of this reduction the patient's strength seemed in no way exhausted by the tremendous drain on his system. While taking the medicine he passed about 8 quarts of urine in the 24 hours. He informed me that he had suffered for some years past from "difficulty of breathing," under which when severe the legs used to swell; bandages were then applied with advantage, the swelling disappearing in a week or two. The present attack came on about 2 weeks previous to his coming under observation, but during this time he was unable to obtain medical assistance, and consequently the fluid rapidly accumulated. This patient, after being under treatment for a little over 2 weeks, was able to undertake daily walks, and finally left for Europe in as good health as he had been in for some time before his last attack.

E.—Dr. Alexander JAMIESON's Report on the Health of Shanghai for the
Half-year ended 31st March 1879.

ABSTRACT of Meteorological Observations taken at the Observatory of the Jesuit Mission at
Sicawei, for the six months ended 31st March 1879. Latitude, 31° 12' 30" N. Longitude
E. of Greenwich, 8^h 5^m 44.63^s.

DATE.	Barometer at 0° C.	THERMOMETER.		Elastic Force of Vapour.	Humidi- ty.	Ozone.	Velocity of Wind observed hourly.	Mean Direction of Wind.	Total Evapora- tion during month.	Total Rainfall during month.	REMARKS.
		Diurnal mean Temperature in Shade.	Extreme Temperature in Shade.								
1878.	mm	°C.	°C.	mm of Mercury.	0-100.	0-21.	Kilom. per hour.		mm	mm	
October	Max...	772.43	—	22.7	100.0	17.0	43.6	N. 26° 6 E.	65.9	43.2	15 days of rain.
	Mean	764.91	18.12	13.6	85.0	8.7	11.5				
	Min....	757.00	—	5.2	45.0	2.0	0.7				
	Range	15.43	—	28.3	17.5	15.0	—				
Nov.	Max...	774.77	—	16.4	100.0	17.0	32.6	N. 16° 8 E.	46.4	90.2	9 days of rain.
	Mean	769.04	11.29	8.4	82.0	9.2	11.1				
	Min....	760.34	—	3.6	36.0	4.0	0.9				
	Range	14.43	—	22.8	12.8	64.0	13.0				
Dec.	Max...	778.54	—	12.1	100.0	21.0	43.7	N. 9° 8 W.	52.2	67.6	3 days of rain.
	Mean	769.49	4.68	5.2	77.0	11.2	17.4				
	Min....	759.55	—	1.4	29.0	8.0	1.0				
	Range	18.99	—	27.8	10.7	71.0	13.0				
1879.											
January	Max...	778.17	—	15.4	100.0	21.0	37.8	N. 12° 5 E.	44.1	52.9	10 days of rain. Storm on the 29th and 30th.
	Mean	770.55	4.91	4.6	79.0	12.0	14.5				
	Min....	760.55	—	1.2	22.0	1.0	1.0				
	Range	17.62	—	23.2	9.2	78.0	20.0				
Feb.	Max...	776.90	—	18.0	100.0	21.0	47.5	N. 45° 8 E.	45.7	47.8	9 days of rain. Storm on the 28th.
	Mean	767.33	5.90	5.7	83.0	12.5	12.7				
	Min....	755.38	—	2.5	34.0	8.0	—				
	Range	21.52	—	20.5	9.9	66.0	13.0				
March...	Max...	774.00	16.3 (29th)	21.5	100.0	21.0	39.5	N. 55° E.	75.2	149.7	12 days of rain. Light snow-fall on 2nd and 3rd. The first rain storm of the year occurred on the afternoon and evening of the 12th, when 55.5 mm. of rain fell.
	Mean	766.56	—	7.7	77.0	13.7	15.2				
	Min....	754.83	0.7 (1st)	1.2	23.0	7.0	—				
	Range	19.17	—	22.7	10.5	77.0	14.0				

For the above abstract of observations I am indebted to the Rev. Father DECHEVRENS, S.J., Superintendent of the Observatory at Sicawei. The instruments employed, and the conditions under which the observations are taken were briefly described in a previous report.*

* *Customs Medical Reports*, &c., 53.

Those who are unfamiliar with the scales adopted will find the following rules convenient for reduction. They are sufficiently correct for all practical purposes:—

RULES.

To reduce millimètres to inches, divide by 25.

To reduce kilomètres to miles, multiply by 8 and divide by 5.

To reduce degrees C. to degrees F., multiply by 9, divide by 5 and add 32.

In all matters affecting the health of the settlements (with the exception of a provision of pure water) the Municipal Councils are working vigorously. Roads are constantly being widened and the system of drainage extended, streets and alleys are carefully and regularly cleansed, the creeks are kept as clean as in the nature of things is possible, while the outside roads, upon which the health of residents largely depends at least during the hot months, are maintained in a condition for walking, riding and driving which may without exaggeration be described as superb. The liberal expenditure upon the public garden and upon trees for the bunds and outer roads is worthy of all praise. In addition, native and foreign hospitals are subsidized for the benefit of the destitute of all nationalities, pauper funerals are provided, and a grant is made for the support of a vaccination dispensary. At this latter institution 1,295 vaccinations were performed during 1878, and at the Gutzlaff Hospital during the same period 1,537, making in all 2,832, or in round numbers, and allowing for vaccinations performed by natives with lymph obtained from the foreign establishments, 3,000. The number of vaccinations performed yearly in this neighbourhood remaining at so high a figure, a diminution ought soon to be noticeable in the prevalence of small-pox. Whatever prejudices the Chinese may once have had are no doubt melting away, but I am informed that a serious objection to the vaccination of girls lies in the fact that without a few marks as evidence of having passed through small-pox, a marriageable maiden is wanting in one of her chief qualifications, natives in search of wives not having as yet learned to accept the vaccination scar as a promise of future immunity.

The Acting Surgeon to the lock hospital in his annual report to the Municipal Council announces that 106 women from 21 houses were on the roll at the end of 1878 as against 68 women from 17 houses at the end of 1877. Notwithstanding this, the absolute amount of disease detected has decreased. He congratulates the community on the greater attention which the women devote to their persons and clothing now that they know that they have to undergo weekly inspection by foreign doctors, and upon the fact that when affected with secondary syphilis they generally leave the settlement for their homes. The women's increased coquettishness in dress is very gratifying, no doubt, but the emigration of those who ought to be detained for treatment does not seem to me to afford just ground for congratulation. It amounts to this, that constitutional syphilis is spread from Shanghai as a centre into districts which for anything we know may be quite free from it. Incredible as it may appear, there are such districts in China. Questions as to the administration of the lock hospital were raised at the Ratepayers' meeting of the 10th March, but no answers were given at the time. Criticism was directed mainly along the lines indicated at page 4 of the 15th volume of these Reports. Answers to some of the questions have since been officially published, and these answers have in their turn been criticised.* From the discussion, all that comes out clearly is that there is no agreement

* *North-China Daily News* of 1st and 2nd May 1879.

among the local medical practitioners as to the value of the system as administered, and that the main feature of a lock hospital is wanting to the Municipal establishment. For my own part I am extremely sceptical as to the advantage to be gained by the public from an institution which after examining women possesses no machinery for the detention of those found to be diseased. I am bound, however, to acknowledge that by bringing prostitution under active police supervision, the Council has succeeded in dispersing a large number of dangerous women who infested Hongkew, and by concentrating the houses frequented by sailors, has paved the way for the introduction of some efficient system of sanitary control. But I find as the result of enquiries made specially on my behalf, that although women sent back from inspection without their certificates are as much as possible withdrawn from the public, whenever a greater demand arises than can be met by the certificated women, those who have been found diseased are brought forward to meet it.

The following classified list of burials is condensed from the certificates and the sexton's books:—

BURIAL RETURN OF FOREIGNERS FOR THE HALF-YEAR ENDED 31ST MARCH 1879.

CAUSE OF DEATH.	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.	FEBRUARY.	MARCH.	TOTAL.
Variola.....	...	...	...	I	...	...	I
Remittent Fever .....	...	f I	...	...	...	...	I
Septicæmia.....	...	f I*	...	...	...	...	I
Cholera.....	2*	3*	...	...	...	...	5
Cholérine.....	I*	...	...	...	...	...	I
Paralysis.....	...	I	...	...	...	...	I
Spina Bifida.....	I†	...	...	...	...	...	I
Valvular Disease of Heart...	I	...	...	...	...	...	I
Aneurism of Aorta.....	...	...	...	...	...	I	I
Rupture of Aorta.....	I	...	...	...	...	...	I
Pultaceous Angina.....	...	...	...	...	...	f I†	I
Pneumonia.....	I*	...	...	I	I*	...	3
Phthisis Pulmonalis.....	...	I	...	...	...	...	I
Bronchitis.....	...	...	...	...	...	f I†	I
Acute Pleurisy.....	...	...	...	...	I	...	I
Gastro-Enteritis.....	I* I†	...	...	...	...	...	2
Cholera Infantum.....	...	I†	I†	...	...	...	2
Gangrene of Small Intestine	I*	...	...	...	...	...	I
Chronic Diarrhœa.....	...	...	f I*	...	...	...	I
Dysentery.....	f I*	...	...	...	...	...	I
Hepatic Disease.....	...	...	I*	...	...	...	I
Abscess of Liver.....	I*	...	...	...	...	...	I
Bright's Disease.....	...	...	I	...	...	...	I
Albuminuria.....	...	...	...	...	I	...	I
Disease of Knee Joint.....	I*	...	...	...	...	...	I
Drowned.....	I*	I*	...	...	...	I*	3
Suicide.....	I	...	...	...	...	I	2
Uncertified.....	I†	I*	2 f I	...	...	f I	6
TOTAL.....	16	10	7	3	2	6	44

* Not resident [i.e. resident for less than six months]

† Infant [i.e. less than 3 years old].

I have adopted an uninterrupted stay of six months in Shanghai as constituting residence, in order to bring these returns into harmony with those of the Municipal Health Officer. Six months is no doubt sufficient for the subjection of new arrivals to local influences. Setting apart

non-residents (20), and children under three years old of residents (7), there remain 17 deaths among adult foreign residents during the winter half-year. Subtracting again two cases of suicide this number is reduced to 15 cases of death from disease. Of these 12 were males, and 3 were females, as against 20 males and 4 females during the same period of 1877-78. They may be thus arranged:—

CAUSES OF DEATH FROM DISEASE AMONG RESIDENT FOREIGN ADULTS, OCTOBER 1878 TO MARCH 1879.

Variola 1	Diseases of Heart and Aorta . . 3	Uncertified 4 (2 females).
Remittent Fever . . . 1 (female)	Diseases of Lungs and Pleura . . 3	
Paralysis 1	Diseases of Kidneys 2	

The deaths among children were due to the following causes:—

CAUSES OF DEATH AMONG THE CHILDREN OF FOREIGN RESIDENTS, OCTOBER 1878 TO MARCH 1879.

Spina Bifida 1 male, aged 11 days.	Gastro-Enteritis . . 1 male, aged 13 months.
Pultaceous Angina . . . 1 female, „ 32 months.	Cholera Infantum . 2 males „ 11 and 13 months.
Bronchitis 1 „ „ 6 weeks.	Uncertified . . . 1 male, age not ascertained.

Of the 20 non-resident adults who died during the six months, 3 were drowned, and of the remaining 17 who died of disease, 3 were females, of whom one died of septicaemia, one of acute dysentery contracted immediately upon arrival, and one of chronic diarrhoea terminating by exhaustion.

CAUSES OF DEATH FROM DISEASE AMONG MALE ADULT NON-RESIDENTS (CHIEFLY SAILORS),
OCTOBER 1878 TO MARCH 1879.

Cholera 5	Gastro-Enteritis 1	Disease of Knee Joint . . . 1
Cholerae 1	Gangrene of Small Intestine . 1	Uncertified 1
Pneumonia 2	Diseases of Liver 2	

In addition to what is above tabulated the certificates give but little information of value for the purposes of this report. The cases of albuminuria and Bright's Disease were fatal by effusion into the arachnoid; the death from acute pleurisy occurred on board a steamer between Kiukiang and Hankow, and the case of aortic aneurism terminated by rupture into the right pleural cavity. The age of this last patient was 47. It may be noted however that there was no death among resident foreigners from enteric fever, dysentery, diarrhoea or affections of the liver, and but one death from remittent fever. I have been privately informed that in this case medical assistance was not sought until too late to be of any avail. Otherwise the result would probably have been different. The occurrence of but a single death from small-pox is also worthy of note.

We have still to congratulate ourselves on the total absence of the diseases most generally fatal among children in Europe and America. It is possible that the massing of numbers of foreign children in schools, which has lately from our altered social conditions become a necessity, may limit our present immunity from the diseases of early life, and to this possibility the attention

of parents and teachers may with advantage be directed. Danger too may arise, unless precautions are taken to ensure the sheltering of children on their way to and from school, during the latter part of the first half-year and the first part of the last half. MARTIAL, though perhaps he could not in a general way be accepted as an authority on the training of youth, was however in the right when he said that children are subjected to sufficient scholastic discipline during the hot season if they are kept from falling sick.* With respect to the possible rise and spread of epidemics among children we have recently had a warning in the rapidity with which during the months of February and March chicken-pox rushed through the settlements. In my own practice I had within four weeks 34 children attacked. Out of these in only four cases was it necessary to keep the patients in bed. It will reassure some people, who cannot divest themselves of the notion that doctors are contagion carriers, to learn that in spite of my constant contact with affected children my own family escaped altogether.

Whatever interest attaches to the medical history of last year centres itself on the visitation of cholera which passed over Shanghai during summer and autumn, and which though brief and slight as cholera epidemics go, yet assisted materially in swelling the death-rate. In the course of July and August reports were received at the native hospitals of the frequent occurrence of vomiting, purging and cramps, rapidly followed by death, among Chinese resident in the city and suburbs, and in the native parts of the settlements. On the 18th August the first case among foreigners of which there is any knowledge, occurred on the river in the person of a boy aged 17, and was rapidly fatal. The Municipal Councils, prompted by their Health Officers, speedily took action, and various more or less effectual precautions against the spread of the disease were adopted, the most important being the careful cleaning of the alleys in the over-crowded native quarters. A Japanese resident in the English settlement died suddenly on the 27th with symptoms of cholera, and meanwhile accounts were received from Wênchow of two cases which proved fatal there on the 24th. On the 30th a resident in Hongkew and a sailor died. On the 2nd September the U.S.S. *Monongahela*, having had during the previous three days seven cases of what was described as cholera morbus (one fatal), left for a cruise. Ten deaths occurred in September. Of these 5 were from ships, one was an adult male who had reached Shanghai only a few days before, one an adult female, one a French police constable, and two were infants—one male 17 months old and one female of 13 months. Two deaths were registered in October and three in November from cholera; and one from cholerine, which may safely be set down as cholera, in October. All the deaths in October and November occurred among adult non-resident males. The last fatal case died on the 28th November. To sum up, there were in all between the 18th August and the 28th November probably not more than 25 cases, of which 19 proved fatal. Of the fatal cases 2 were infants under two years, 1 was an adult female, and 16 were adult males. Of the latter 3 only were residents.

It appears certain that we must count upon the annual occurrence of cholera of some sort until such time as we are lucky enough to discover its source, and arrest it there. It should not be forgotten that in forms of greater or less severity cholera every year attacks the natives around us, about whom we know so little. My colleague Dr. GALLE seems to attribute the periodic visitation of foreigners, to the want of a public slaughter house, and the absence of suitable regulations for the

* *Aestate pueri si valent satis discunt.*—*Epig.*, x., 62.

carriage of night soil.* Dr. LITTLE, on the other hand, in his Annual Report of the General Hospital, refers the prevalence of cholera among the shipping to the consumption of water contaminated by excretions from Chinese who have been attacked by the disease.† Of this source of danger, however, shipmasters and officers received timely warning from Dr. BURGE, who at the beginning of last season's epidemic issued a circular containing much excellent advice as to the measures to be immediately adopted on the occurrence of a suspicious case, and as to the precautions that ought to be observed with a view to prevention. Among these latter figures "Boiled water or boiled rice water should be provided for the crew, and none other allowed to be drunk." Whether this recommendation was to any considerable extent carried into effect or not must remain doubtful. Sailors are proverbially careless, and the majority of them are quite capable of dipping up and drinking water from alongside, even though buckets of boiled water might stand prepared for them on deck. But this fact must not be lost sight of—that "almost without exception men seized with cholera were on a debauch or had been on a debauch just previously." This is Dr. BURGE's experience, and it coincides with the observations made in 1877 at the General Hospital, and with the histories of some of the cases briefly related below. And here I may note that Dr. BELL of Louisville, Miss., observed during the recent American epidemic of yellow fever that persons lying out at night were particularly liable to fatal attacks. The suggestion may appear absurd, but instances occasionally arise in which apprehension plays a large part if not the principal part in producing cholera. At least two such cases occurred here last year. That mental conditions will produce ague or an affection indistinguishable from ague, and curable by quinine, is, I believe, well established,‡ and cholera, it must be admitted, presents many analogies with fevers of malarial origin.§ Moreover, a certain number of respectable pathologists refer the phenomena of cholera to an initial lesion of the nervous system.

The first case of cholera treated last season in the General Hospital was brought on the 28th August, the last was admitted on the 29th November. In all 17 cases were under observation, of whom 10 died. Through Dr. LITTLE's courtesy I am able to give a sketch of 6 of these latter.

August 28th 1878.—A., aged 27. Seized with purging 24 hours before admission. Took castor oil and laudanum 8 hours ago. Vomiting and cramps began two or three hours later. Patient asserts that he passes urine with each stool. Collapsed on admission. Treated with quinine subcutaneously. Died 70 hours from first appearance of purging.

Postmortem; 18 hours after death.—Body muscular and well nourished. Pericardium contained half an ounce of fluid. Left side of heart empty; right side full of fluid blood. Many large ecchymoses under

* Il est à espérer que...une entente pourra s'établir entre les deux Municipalités.. pour une meilleure réglementation du transport des vidanges.....et la création d'un abattoir public. Nous pourrions alors voir disparaître les petites épidémies cholériques qui sévissent tous les ans en Septembre.—*Rapport sur l'état sanitaire pour l'année 1878.*

† La Conférence opine que, comme il paraît démontré par l'expérience que les déjections des cholériques renferment le principe générateur du choléra, il est légitime d'admettre que les égouts, les lieux d'aisance et les eaux contaminées d'une ville peuvent devenir des agents de propagation de la maladie.—*Procès-verbaux de la Conférence Sanitaire internationale 1874*, p. 412.

‡ TUCKER, *Influence of the Mind upon the Body*, pp. 314, 372.

Les causes de la susceptibilité...doivent être cherchées...dans l'individu-même...les excès surtout alcooliques...dans la disposition d'âme, chagrin, frayeur, peur.—*Procès-verbaux*, p. 457.

§ Dr. BILLING says—"I may simply state that cholera is a species of fever."—*The Nature and Treatment of Asiatic Cholera*, p. 7.

visceral pericardium, and one the size of a pea in the substance of the heart. Subpleural ecchymoses. Both lungs collapsed; right adherent; no congestion. Liver and kidneys gorged with blood. Gall bladder full. Urinary bladder contained half an ounce of urine.

September 24th.—B., aged 46; became suddenly collapsed, with hardly any purging or vomiting, 6 hours before admission. Pulseless and voiceless; nails deeply blue. Had been drunk for two days, and had spent all night of 23rd-24th in the streets. Treated with sinapisms repeatedly applied over chest and abdomen, and packing with hot bottles. Allowed to drink freely of water, beef tea and milk (all iced). Purging and vomiting were both trivial. Urine was said to be passed with each stool. An attempt to introduce the catheter failed in consequence of a stricture, and it was not considered advisable to persevere. Pulse, voice and bodily heat returned 36 hours after admission, but three hours later the patient died in a sudden access of dyspnoea.

Postmortem; 9 hours after death.—Rigor mortis. Eyes deeply sunk; eyeballs exposed. Features shrunk; skin of hands and feet white and wrinkled. Pericardium studded with ecchymoses, especially on posterior aspect of heart along interventricular septum. Both sides of heart empty. Subpleural ecchymoses. Lungs healthy, congested at bases. Stomach distended with gas; wall thinned and intensely injected; mucous membrane pulpy (scraped off with back of knife). Small intestine contained much bright yellow faecal matter. Its mucous surface was stripped of epithelium, and injected throughout; the vessels very finely demonstrated. Large intestine distended with gas; nearly empty. Slight congestion of mucous membrane. The liver was healthy, gall bladder full. Kidneys of natural size, blood pouring from them on section. Spleen of natural size, very soft. Bladder contained from half an ounce to an ounce of urine, solid on boiling.

October 11th.—C., admitted at 9.30 A.M. Had been drunk for two days; lay out all night of 9th-10th October. Hardly any purging. Constant attempts to vomit, which brought up a little mucus along with the fluids he had swallowed. Treated with sinapisms, hot packing; ice to suck; subcutaneous injection of $\frac{1}{2}$ grain sulphate of morphia. Died at 11.30 A.M.

Postmortem; 21 hours after death.—Rigor. Eyeballs exposed; features pinched. Heart and lungs healthy; no subpericardial or subpleural ecchymoses. Stomach distended with gas. A patch (4 in. by $2\frac{1}{2}$) of commencing gangrene on anterior surface and greater curvature near cardia. Mucous membrane of rest of stomach and of duodenum pulpy. Small intestines highly injected, contained a large quantity of greenish fluid. Liver small and pale. Gall bladder about half full. Urinary bladder empty but not contracted.

October 25th.—D., aged 40. Was seen in apparently good health during the forenoon; admitted in deep collapse at 3 P.M. Treated with a subcutaneous injection of quinine, followed by hourly draughts of magnesia and antimony (BILLING's plan). Died at 10 P.M.

Postmortem; 18 hours after death.—Body stout and well nourished. Heart fatty; no extravasations on surface. Lungs normal. Liver large and fatty. Right kidney, cortical substance shrunk; left kidney rather large. Bowels empty. Bladder empty.

November 14th.—E., aged 27. Admitted pulseless, but surface warm, at 7.45 A.M. Had gone on board his ship at 2 A.M., after drinking. Soon afterwards was seized with cramps, vomiting and purging. Died at 9 A.M.

Postmortem.—Body muscular and well nourished. A little bloody serum in pericardium. A few subpericardial ecchymoses. All the cavities of the heart full of fluid blood. Lungs normal. Liver gorged with blood. Kidneys congested. Small intestine congested; full of gas. Colon contracted. Bladder empty, and of stony hardness.

November 26th.—F., aged 22. Had been drinking for some time; was seized with cramps at 7 P.M., reached hospital at 10 P.M., when he was cold, pulseless and voiceless. Legs and arms violently cramped. Hardly any vomiting, and not much purging. Nine hours after seizure reaction seemed to set in with hot perspiration, but there was no return of the pulse nor abatement of the general symptoms. Died 14 hours after beginning of attack.

Postmortem; 22 hours after death.—Rigor mortis excessive. Subpericardial ecchymoses along lines of septa. All the cavities of heart filled with black, fluid blood. Lungs healthy but shrunken. Liver congested, and in parts nearly black. Kidneys gorged with blood, not otherwise diseased. Much congestion of small intestine. Bladder empty.

Of the cases that recovered in the General Hospital, three were treated with hypodermic injections of quinine, two with carminatives, one with carminatives and opium, and one had no treatment to speak of. Too much stress must not be laid on the results of treatment, as the cases varied widely in severity. Doubtless, however, those were the most threatening in which quinine was injected.*

The following cases occurred in my private practice:—

September 3rd.—G., male, 17 months old, living in the Nanking Road. Had had loose motions for a week, and painless watery diarrhoea for three days, but, according to the parents' account, had had a good appetite, and had been bright and cheerful up to this morning. It was noticed that he had passed no urine since the previous noon. At 10 A.M. he suddenly became collapsed, began to purge and vomit violently, and at short intervals the leg muscles were stiffened and the thighs strongly flexed on the abdomen. I saw him at 11.30. He was then cold, pulseless, vomiting and purging incessantly, eyes excavated, conjugate deviation of globes to right, the corneae hardly visible. Head turned to right, but occasionally rolled to left, and immediately jerked back to right. He was at once packed in a blanket, surrounded with hot bottles, a bag of hot salt laid on the abdomen, and $\frac{1}{10}$ grain of morphia with $\frac{1}{150}$ grain of atropia injected subcutaneously. Beef juice was administered assiduously, with an occasional teaspoonful of champagne. At 12.45 P.M. the pulse was faintly perceptible and the hands sensibly warm, but the legs and feet continued as cold as ice. The deviation of the eyes was less marked. At 1 P.M. he fell asleep, and roused at 2 P.M. when he looked about him and recognised his mother. At 2.30 P.M. he suddenly gasped and died. There was no *post-mortem*.

September 6th.—H., female, 2 years, resident by the riverside in Hongkew. The child had gone to bed well, and slept all the previous night. Diarrhoea set in at 8 A.M., and at 9 A.M. had become excessively violent. There was constant vomiting of colourless fluid similar in appearance to that passed from the bowels. No urine had been excreted since the previous afternoon. I saw her a little before 12 M. The pulse was then barely perceptible, the lips and cheeks were blue and cold, extremities also cold, chest and abdomen warm, eyes sunken but not deeply excavated. The same treatment was adopted as in the previous case; purging and vomiting ceased immediately, and beef juice was freely given. At 3.30 P.M. the eyes were more sunken, vomiting had not recurred, but there had been one large, colourless passage from the bowels. The pulse could now be counted, and there seemed to be some slight increase in the bodily warmth. The child was drowsy. A powder containing $\frac{1}{32}$ grain of morphia with one grain of quinine was now laid on its tongue every hour. At 8.30 P.M. there had been no return of either vomiting or purging. The powder was ordered to be given every four hours during the night. At 11.30 P.M. a large, colourless, watery stool was passed. On the 7th at 6 A.M. a stool, watery but slightly bile-stained, and with a faint faecal odour was discharged; and at 9 A.M., after 42 hours of anuria, a small quantity (about one ounce) of urine was collected, highly albuminous. Recovery was now rapid.

It does not perhaps matter very much to a man at the point of death whether the disease which is inevitably about to kill him be called by one name or by another. But it may be of great importance to the survivors, many of whom, frightened by a name and all that it implies,

* It is almost amusing to find the venerable Dr. BILLING (*The Nature and Treatment of Asiatic Cholera*, 1875) writing "the remedy for this disease is" tartar emetic and sulphate of magnesia, as though he were talking about the treatment of intermittent fever by quinine.

are rendered more susceptible of any prevalent disease, and less able to struggle against it if by chance it should assail them. If true malignant Cholera visits us every year there is little to be done except to cleanse our streets, avoid obvious sources of infection, and trust to luck. But if there be good reason to doubt that our formidable visitor is anything more than a non-specific disease, for the most part avoidable by a strict observance of common-sense hygienic rules, the most nervous people may take heart and keep it so long as they carefully control their water supply, pay ordinary attention to the cleansing and cooking of their fruit and vegetables, dress prudently by night as well as by day, and protect themselves against exposure to the sun and to sudden changes of temperature. The pathology of Cholera is far from being well worked out, but as a clinical fact it is undeniable that the course of symptoms in malignant Cholera and in cholera morbus is precisely the same.* In other words, at the bedside, and I may add, in the *postmortem* room, there is nothing to distinguish the generally avoidable disease from that which is nearly if not altogether unavoidable.† The one cardinal distinction lies in this, that the latter is epidemic and the former not so. So faint is the line that clinically separates one from the other, that were a few isolated cases of cholera morbus to occur, and after an interval to be succeeded by cases of precisely the same character but occurring in large numbers, the latter group would be described as malignant, or Asiatic, or epidemic Cholera. The "malignity" of the disease may arise from its becoming epidemic, or it may become epidemic because it is malignant; but however this may be, epidemic and malignant are convertible terms as applied to cholera. Now, it is clear that a

* SYDENHAM, describing "autumnal cholera" as observed in 1669, says:—"Malum ipsum facile cognoscitur: adsunt enim vomitus enormes, ac pravorum humorum cum maxima difficultate et angustia per alvum dejectio; ventris ac intestinorum dolor vehemens, inflatio et distentio; cardialgia, sitis, pulsus celer ac frequens, cum aestu et anxietate, non raro etiam parvus et inæqualis; insuper et nausea molestissima; sudor interdum diaphoreticus, crurum et brachiorum contractura, animi deliquium; partium extremarum frigiditas; cum aliis consimilibus notæ symptomatis, quæ astantes magnopere perterrefaciunt, atque etiam angusto viginti quatuor horarum spatio agrum interimant."—*Observat. Med.*, iv., 2. Again, under 1676, he adds to his previous description:—"Neque enim solum abdomen, uti alias in hoc malo, sed universi jam corporis muscoli, brachiorum crurumque præ reliquis, spasmis tentabantur dirissimis, ita ut æger e lecto subinde exiliret, si forte extenso quaquaversum corpore eorum vim posset eludere."—*Epist.*, i., 7. Yet this formidable array of symptoms yielded as a general rule to simple anodyne treatment:—"Ad quendam vocatus per id temporis truculentissimo illo, quod modo descripsi, symptomate tantum non enectum, et enormi vomitione, spasmodumque violentia animum agentem, cum sudore frigido, et pulsu vix micante," he gave 25 drops of laudanum in a spoonful of cinnamon water, repeating the dose at short intervals, and obtained a rapid recovery.

During the night of the 27th September I was called to a patient who after a day's painless diarrhoea was seized with serous vomiting and purging in gushes, cramps in the extremities, intense thirst and much præcordial distress. Immediately after an injection of morphia and atropia the purging and vomiting ceased, and the further treatment consisted in a sinapism and an unlimited supply of iced soda water. So again, as these pages are being written (23rd April), I have had a case in which slight diarrhoea for 18 hours ushered in violent and almost continuous serous purging, and vomiting (not very urgent) of serous fluid, with great anxiety and dyspnoea, hardly perceptible pulse, blue lips, pinched features, skin bathed in cold sweat, severe cramps in both calves and in *extensor* muscles of right thigh. Every attempt to rise from the horizontal position produced a state approaching syncope. Here, after the chest and abdomen had been covered with mustard, morphia and atropia injected, and a tumbler of champagne administered, there was total cessation of purging for 10 hours, when a small watery stool was passed, followed by another of the same character 12 hours later. Convalescence was rapid and uninterrupted. During an epidemic these would have been classed (by me as well as by everybody else) as cases of Asiatic Cholera, but I cannot believe that they were at all different from SYDENHAM'S common English autumnal cholera, which in persons not run down by age, disease or excesses, is generally amenable to judicious treatment.

† "Cholera is a disease which is in lighter form sporadic, in graver specific, and usually epidemic."—LEBERT in *Ziemssen's Cyclopædia*, i., 341. Upon the impossibility of clinically distinguishing between cholera morbus and Asiatic Cholera Sir J. R. CORMACK lays great stress, quoting KNOX to the same effect.—*Clinical Studies*, i., 286.

visitation such as that of last year, in which no more than about half a dozen residents on shore were attacked, cannot with any justice be styled an epidemic. And this consideration might be materially strengthened were it right or possible to analyse the cases that actually did present themselves. But this much may be said, that in at least two, exaggerated apprehension played some part, that in two others intemperance and general recklessness of living were notorious, and that in yet another there was every reason to believe that neglected diarrhœa culminated in cholera on account of the neglect.

Or we may approach the same conclusion in another way. Were any one who has watched an epidemic of Cholera in Europe asked to describe the disease he would probably write somewhat as follows. Cholera is a specific communicable malady, endemic in certain regions, occasionally epidemic in others; each individual attack, whether ushered in or not by painless diarrhœa lasting for a few days, is usually characterised by nausea, griping, diarrhœa, faintness and thirst, soon followed by purging and vomiting of alkaline serous fluid, complete anuria, violent cramps in the extremities, trunk and face, general cyanosis, deeply sunken eyes, loss of voice, peculiar and indescribable expression of countenance, and collapse evidenced by extremely feeble circulation, coldness of surface which is generally bathed in perspiration, oppressed breathing and restlessness; death frequently occurs in this stage but when reaction is established secondary fever, often of a typhoid character, may be developed, to which or to persistent suppression of urine the patient may succumb. But there is no consensus of opinion as to how many of these characteristics must be present together in order to justify the diagnosis of malignant Cholera. Often the stage called that of premonitory diarrhœa is not passed. Dr. SLOAN informs me that in one ship, of four men who had been on a debauch together and returned on board together, and were attacked with similar initial symptoms, two never reached the asphyxial stage, while other two speedily died in collapse. It was beyond doubt that whatever disease one had all had. It is well known that cramps may be absent from first to last. Again, in many cases there is no premonitory diarrhœa or vomiting, and collapse may be the first symptom. As the late Dr. James HENDERSON picturesquely expressed it, the disease begins by killing the patient. Indeed, often the intensity of the disease seems almost to stand in an inverse ratio to the quantity of fluid secretion during the second stage, and except by anuria there is literally no means of distinguishing between the algid condition in cholera and the like condition in pernicious malarious fever, or in destructive inflammation of an abdominal viscus. We might suppose that anuria was an essential and crucially diagnostic symptom, judging from the stress laid upon it by most authors, and the anxiety with which experienced observers watch for its cessation as one of the earliest indications of improvement. Yet even this fails us. As a matter of fact, it was absent in some of the cases above related. Apart from these, however, it is occasionally present in the so-called pernicious intermittents,* and on the other hand, BARTELS (*Ziemssen's Cyclopædia*, American Translation, vol. xv.) speaks quite as a matter of course of cholera without anuria, and LEBERT (*ib.*, vol. i., 437) refers to fatal cases in which there was only partial suppression. Secondary

* TOUCHARD (*Rivière du Gabon et ses Maladies*:—Thèse de Montpellier, 1864) gives a remarkable case where there was complete suppression of urine for 48 hours, with cold sweat, abundant serous stools, and deep collapse, but where the history made it clear that the attack was one of intermittent fever. See also REYNAUD, *Sur les fièvres pernicieuses de la Guyane*, and especially FALLIER, Thèse de Paris, 1861.

fever occurs less frequently in India and China than in England. Out of the 17 cases treated in the General Hospital last season it was observed in two only, in one of whom it proved fatal on the sixth day of the original disease. In this case quinine had been injected hypodermically. Secondary fever, therefore, should be left out of the definition.

Discussing thus every symptom we are, I think, led to establish that the *proprium* of malignant Cholera lies in its epidemic character. Tried by this test, therefore, last season's visitation fails to establish its claim to the title. And finally, I may remark that were it true Asiatic Cholera, we should have expected an unusual prevalence of apparently simple diarrhoea at the same time. This is invariably a factor in the history of an epidemic however slight. But there was nothing of the kind.

On reading over the cases that I have related one cannot fail to be struck by the fact that many began by a debauch, and many were immediately preceded by long exposure, presumably in a state of drunkenness, to night air. With regard to the effects of the latter, I have already cited the experience acquired in the late American epidemic of yellow fever. As respects the former,

It was an interesting fact that the greatest number of persons (in the Berlin epidemic of 1831) were attacked on Tuesday, which is clearly to be attributed to the Monday excesses of the labouring classes.* Alcoholism, however, predisposes to cholera everywhere.†

The same might be said of every acute inflammatory affection of the stomach and bowels. In the reports of the *postmortems* made at the General Hospital, wherever the condition of the intestinal tract is specially mentioned the lesions described are those of gastro-enteritis of a very acute character. Moreover, the histories of the cases during life may in almost every case, if not in all, be explained without recourse to the specific poison of Cholera, whatever that may be, as the disease material. Every one knows that gastro-enteritis is present in Cholera as well as in many other diseases and in cases of irritant poisoning. My contention is that when considering such a series of instances of fatal gastro-enteritis as we encountered last year, we are, in the absence of epidemicity, no more compelled to assume Asiatic Cholera as the cause than any one or more of a number of causes, such as evil or careless habits of life, excesses of various kinds, complete surface chilling, neglected diarrhoea and so forth. The notorious case of the Duc de CHOISEUL (1847), in which LOUIS diagnosed Cholera, but which proved to be suicidal poisoning, carries its own lesson with it. The fact is most significant that the overwhelming majority of cases were furnished by sailors, a class of men reckless, prone to excesses, homeless on shore, unsuitably clad and fed, and specially likely to suffer from impure water and fiery or adulterated liquor. Perhaps it may even be unnecessary to invoke adulteration of such liquor as is consumed in the taverns frequented by sailors. Rectified spirit can be obtained in Shanghai for 75 cents per gallon, and with the addition of various essential oils, colouring matters, etc., can be readily transformed into a liquid very grateful to palates that demand only to be sufficiently scorched. Leaving out of consideration the gain on dilution with water, allowing 100 per cent. for cost of manipulation, working expenses and trade profits, and assuming the ordinary glass to contain three fluid ounces, it will be seen that such liquor can be supplied retail at 3 cents per glass.

* LEBERT, *l. c.*, 360.

† *ib.*, 395.

Mr. THIRLBY of the Medical Hall has made several analyses of "Hongkew gin," and he informs me that (contrary to what I believed and still believe to have been the case seven years ago*) the characteristic of that fluid is now its being almost undiluted ethylic alcohol of commerce. Taking all these points into consideration, it is not necessary to go further in order to find a sufficient explanation of the symptoms and *postmortem* appearances in the majority of cases.

But whatever may be the nature and name of the disease or diseases which last year caused death with so much certainty and rapidity, and however the cause or causes may have been brought to bear upon the victims, it is clear that, in view of the possible reproduction of our late experiences, treatment to be effectual must take the form of prophylaxis. Supposing for a moment that our annual visitation is due to an air-borne poison generated locally, Dr. GALLE's anticipations of improvement when better arrangements are made for slaughtering cattle and for transporting night-soil will perhaps be realized. If it be due to a water-borne poison, whether specific or not, the only security of a public character would lie in such rigorous watching of the river as would prevent contamination of our drinking water with decomposing organic matters and with discharges from patients suffering from bowel disease on board native and foreign vessels. How far this would be practicable is another question. It is certain that no precautions would avail to prevent admixture of infected water brought into the river by creeks draining country districts where cholera always appears before its presence is signalled among foreigners in Shanghai. But a properly authorized officer, charged with the sanitary inspection of the river and provided with a sufficient staff, might do a great deal towards lessening the chances of danger so far as they arise from the ingestion of impure water. Dr. BURGE has made an excellent suggestion, that the native Humane Society, whose employés have a little steamer at their disposal, should if possible be induced to extend its usefulness by picking up the bodies of animals as well as of men that may be found floating in the river. At any moment, many carcasses of dogs and other animals are to be seen borne hither and thither by the tide, to the serious pollution of the water, and of the air when, as frequently happens, they are cast on shore. Such carcasses ought to be collected at least twice daily, and buried far down on the Pootung shore. But in fact efficient protection against impure water is to be found only in careful filtering and boiling before it is brought into domestic use. And, finally, on the supposition that the consumption of poisonous liquor and the chronic saturation of the body with liquor not so acutely poisonous have to do with the phenomena observed, preventive measures, in the one case public and philanthropic, in the other private and personal, are all that we have to confide in. The Temperance Society has done much for foreign sailors frequenting the port, by providing at a minimal charge comfortable rooms, good food and innocent amusements for all who choose to take advantage of the benefits it offers. But there is a large class of sailors almost or altogether outside the circle of its influence. I understand that one at least of the local clergy visits diligently among the shipping, an arduous task, but one certain to be sooner or later effective in diminishing all diseases affecting the floating population which can be traced to exposure and dissipation.

The following cases occurring among natives present some points of interest :—

Wounds of several large Joints.—A remarkably muscular Chinaman, aged about 35, who two hours before had been set upon in a tea house by several men armed with knives and Japanese swords, was

* *Customs Medical Reports*, iv., 103.

brought by the police to the Gutzlaff Hospital. His condition was as follows: Over the left eye there was a lacerated wound inflicted with some blunt instrument; through this and extending down to the bone was an incision about two inches long, perpendicular to the eyebrow at its middle point, apparently made with a small sharp knife. In a similar position over the right eye there was a like cut, also reaching the bone. The skin of the nose on the left side and to some extent on the right was sliced cleanly off. The left elbow joint had been laid open by an obliquely falling blow which separated the external condyle of the humerus, but the brachial artery escaped. The left hip joint was exposed by a cut 8 inches in length which had notched the upper margin of the acetabulum, divided the capsular ligament and split the femur longitudinally through the great trochanter and for about 3 inches below. An oblique cut nearly in the middle of the thigh on its external aspect had divided the vastus externus and a portion of the vastus internus, and had gone clear through the shaft of the bone. The knee joint was untouched, but two inches below it the tibia was split by a longitudinal cut, for a length of about 3 inches. The ankle joint was laid open by a blow which had sliced off the articular surface of the astragalus and about half the external malleolus. All the tissues were divided except the tendo Achillis and the skin covering it. On the right side, the knee joint was split open longitudinally; the blow fell between the condyles of the femur internal to the patella which was untouched, and extended into the tibia as far as the tuberosity, dividing the head of this bone into nearly equal lateral halves. The ankle joint was opened through the internal malleolus, the astragalus escaping; superficially the incision reached across the front and inner side of the joint. There was no hæmorrhage when the man was brought to the hospital, but notwithstanding the excessive bleeding that had occurred, the severity of the injuries, and the time that had elapsed, he was perfectly conscious, and the pulse could be felt at both wrists. He swallowed a large dose of brandy beaten up with a couple of eggs, and amputation of both feet was then performed under chloroform, as little bone as possible being removed, and the flaps being necessarily formed in a very makeshift sort of way. The anterior tibial bled on the left side, and the posterior on the right, other vessels seen in the wounds were ligatured as a matter of precaution. The two amputations did not take five minutes as I was fortunate enough to have the willing and intelligent assistance of two gentlemen, Mr. W. L. RUSSELL, and Inspector WILSON of the Lowza police station, whose aid under circumstances very trying to their nerves was invaluable. The remaining wounds were carefully cleansed and closed, and an attempt made to get the injured bones and joints into good position. The patient rallied well, and after some more brandy and egg fell asleep. He woke four hours later, took a draught of milk, complained of weakness, and shortly became unconscious. In this condition he remained for four hours longer, when he died.

It seems probable that he was first stunned by the blow over the left eye, and fell nearly on his right side, the right leg semiflexed and supported by the outer side of the foot. The face wounds were inflicted I should suppose by one person, armed with a keen, flexible knife, while another person, using a Japanese sword axe-wise, and exerting great force, slashed at the limbs chiefly about the joints. It is hardly necessary to say, that although something in the shape of operation had to be done, there was no expectation of the patient surviving for even so long as he actually did survive.

Large collection of air forming a Sub-mammary Tumour.—A Chinawoman of delicate appearance, aged 30, presented herself at the Gutzlaff Hospital with the following history: She had been for several years mistress to a foreigner, and had enjoyed, she said, good health until 5 months ago when she noticed a swelling of the left breast which came on without a blow or any other known cause. In some weeks the enlargement was painful but not severely so. It increased gradually, and after a little more than a month it gave no inconvenience except from its size and, as the patient described it, its weight. Latterly it prevented any use of the left arm. Three weeks ago a small opening appeared on the inner side of the tumour about the middle. To this, under native advice, a resinous plaster was applied. She had no knowledge of her family history as she had been sold in early childhood. She denied having ever had syphilis, but she presented three bald, depressed patches on the scalp, each about the size of a shilling, which she said were the scars of ulcers which remained long open four years ago, and finally healed under native

treatment. On examination, the right mamma was found to be very slightly developed. The left was the seat of a tense, shining tumour with large veins mapped over its surface. It was ovoid in shape, the broader end reaching the clavicle, the smaller end formed by the nipple and apparently healthy gland tissue. It measured in circumference $28\frac{3}{4}$ inches, and from side to side over the surface at the widest part $13\frac{1}{4}$ inches. It was painless to pressure, resonant to percussion over its upper and anterior surface, and at the base gave a distinct sense of fluctuation. The above mentioned aperture was discharging a little opalescent fluid, but a probe could not be passed for more than $\frac{1}{8}$ inch in any direction through it. There were no scars anywhere on the neighbouring skin. There was no dyspnoea nor cough. The chest sounds behind on both sides and all over the right side were healthy. Immediately in front of the left axillary line there was a strip of absolute dullness with no respiratory sounds, extending from the axilla to the lower costal border. The diagnosis was chronic abscess behind the gland, with partial decomposition of its contents subsequent to the spontaneous opening, and generation of gas. It was purposed to open at the site of aperture, make a counter incision and draw a drainage tube through. However, on cutting into the site of the opening the entire tumour disappeared, collapsing by the escape of perfectly odourless air. Not a drop of fluid exuded. On now examining the left chest tympanitic resonance was found over the entire front, with very distant respiratory murmur. The great pectoral was wasted, nothing seeming to lie between the skin and the ribs. There was a deep depression beneath the clavicle, and corresponding to it a U-shaped deficiency in the first rib, the anterior border of which was rough and projecting. Through this opening the finger could be pressed far into the chest. The flaccid bag of skin rose and fell with each respiratory movement, and the cardiac impulse was unusually distinct. But there was no communication with the lung. A long probe passed through the upper opening was directed to the lowest and most posterior part of the sac. On cutting down on it a distinct cyst wall was pushed out before the point of the probe, but a doubt as to the possible nature and connexions of this membrane decided me not to attempt its entire or partial withdrawal. It was therefore incised, a drainage tube drawn through, and firm pressure applied by pads of cotton and strapping. The sac discharged freely, and was washed out every morning. Thirty grains of iodide of potassium was administered daily. In less than a week the skin had regained its colour and elasticity, and the drainage tube was replaced by a skein of horsehair. A few strands were withdrawn each day until the discharge had almost ceased. Meanwhile communication with the bronchi had been re-established, and air was expelled from the openings in the chest wall whenever the patient coughed. From the fifteenth day the sac was daily injected with a solution of iodine, and by the 30th day, there was neither discharge of fluid, nor expulsion of air when the patient coughed. The upper wound was now merely skin deep, and she was dismissed.

Previous to her discharge, examination of the left chest detected a large but seemingly superficial secreting cavity, and it was noted that contemporaneously with the closure of the communication between the bronchi and the open air through the chest wall, cough was established, along with the expectoration of purulent sputa. In spite of this her weight increased by 5-lbs. during the last seven days of her stay in hospital, and her general appearance improved in a marked manner.

The history given by the patient was clearly unreliable. There had doubtless been an old-standing pneumothorax, which by necrosis of the costal pleura at some point gave rise to the emphysema. It was curious, however, that the areolar tissue into which the air escaped should have acted like a closed serous sac, so that instead of a general inflation of the subcutaneous structures, a strictly circumscribed tumour formed.

Traumatic Stricture of Urethra:—Gouley's Operation; Cure.—A man, aged 50, entered the Gutzlaff Hospital complaining of constant dribbling of urine. Two or three times daily violent paroxysms of pain occurred in the bladder, which produced severe straining, generally relieved by the extrusion of a few drops of blood. Nine months ago, passing over a bridge with a burden on his shoulder he slipped with one leg between the slabs and was brought up with the force of his full weight on the perinæum. A good deal of blood flowed at the time, and for several days the urine was mixed with blood, and the act of urination was excessively painful. Shortly afterwards a swelling appeared in the perinæum, which continued very tender

for a time, but finally disappeared without bursting. Ever since, urination has gradually become more and more difficult until within the past month the present condition was reached. He has a severe cough which he attributes, no doubt correctly, to his being constantly wet, but examination of the chest reveals no lung trouble. On examination the bladder was found empty; there were no sinuses; the prostate was slightly enlarged. Five inches from the orifice of the urethra a stricture was encountered, impassable to bulbous bougies, ranging from 10 to 5 of the French scale. The seat of the stricture was very irritable, the most delicate manipulation producing rather smart bleeding. Having filled the urethra with oil, the patient being under chloroform, a filiform whalebone bougie was after many unsuccessful attempts insinuated into the bladder. Upon this a No. 8 grooved and tunnelled catheter staff was threaded and passed down to the stricture, against which it was firmly held by Dr. LITTLE. The patient was then secured in the lithotomy position, Captain Joseph STEELE undertaking to superintend the lashing of him, and rendering valuable assistance throughout the operation. The perinæum was shaved, and incised from the scrotum to a spot half an inch from the margin of the anus. The urethra was quickly exposed through nearly the entire extent of this wound, and was cut into upon the groove on the bridge of the staff, that is to say about a quarter inch in front of the stricture. The edges of the urethral incision, as far back as possible, were transfixed with silk threads by drawing upon which the interior of the urethra was brought into full view. The catheter was now slightly withdrawn, exhibiting the whalebone guide and the anterior aspect of the stricture, which appeared to be the result of a dense, concentric thickening of the wall of the canal. A small probe-pointed bistoury was made to follow the guide through the strictured portion (about half an inch) and then through a like distance behind it. The floor of the perinæal wound was thus formed by the internal aspect of the roof of the urethra for a distance of a little over an inch. The catheter was then passed on into the bladder, and some four or five ounces of urine drawn off. No instrument was retained. The scrotum was supported on a folded towel, and the legs bandaged together; 10 grains of quinine with 1 grain of opium was administered and the patient was removed to bed. The paroxysms of pain ceased from the moment of the operation. Urine escaped through the wound for about 12 hours, when it began to drip again from the meatus, but as soon as the first swelling disappeared, there was no further escape by the penis. On the second day (42 hours after the operation) I attempted to pass a No. 11 sound. The point reached the bladder, but as an attempt to press it onwards occasioned severe pain I desisted. A considerable quantity of urine welled out by the side of the sound. The attempt was in fact made too soon, before suppuration was established. At the end of four days No. 9 catheter slipped by its own weight into the bladder, the patient complaining of no pain. From this out a sound or catheter, varying from No. 9 to No. 11, was passed every second day. On the 11th day the perinæal wound was watertight, and urine was passed in a full stream four or five times in the 24 hours. No. 24 of the French scale was now passed without difficulty every day until the 17th day, when the patient was discharged at his own request, promising to return once a-week in order to have an instrument passed.

This method of treating strictures at and in the immediate neighbourhood of the bulb leaves absolutely nothing to be desired when luck crowns one's patience in coaxing a guide into the bladder. When this is impossible WHEELHOUSE'S operation is the easiest, and probably the best:—

By it I, last year, succeeded in the most difficult case which has ever fallen to my share, in overcoming an eccentrically twisted stricture about $\frac{3}{4}$ inch in length, situated immediately behind the bulb. Every line of this distance had to be laboriously dissected. The stricture had originated many years ago in a neglected gonorrhœa, and had been complicated by amateur surgery of the rudest imaginable description. For instance, on one occasion a straight steel rod had been driven directly down the urethra during a fit of retention. By some extraordinary chance it reached the bladder after perforating the prostate gland. It had, however, previously passed through the wall of the urethra on the left side at the junction of the bulb

and membranous portion, tunnelling a passage for itself as far as the prostate. The hæmorrhage was very severe, but the retained urine escaped along with the blood—an ample justification of the operation in the opinion of the patient. The effect on the stricture was so to distort it that the most persevering attempts to get fine instruments through it proved unavailing. Perinæal section without a guide was in such a case not to be thought of. By the “Leeds method” and with WHEELHOUSE’s instruments, however, no unconquerable difficulties were encountered. In this case I was fortunate enough to have the assistance of Drs. TERRY and ARMSTRONG of H.M.S. *Charybdis*.

*Chinese Operative Midwifery.**—At 7 P.M. on the 1st January I was called to see a Chinawoman, aged 25, at the termination of her second pregnancy. Her former labour, four years ago, had been short and easy. She had now been in labour for three days, an arm presenting, and a series of native midwives had in turn maltreated her and had finally given her up. On examination I found her general condition nearly as bad as could be, the bladder distended, the child’s left arm outside vulva with the humerus broken just above the elbow joint, the ends of the bone two inches apart, and united by what felt like an empty bag of skin. This will give some idea of the traction that had been employed. The child, dead of course, lay in the dorso-posterior position, thoroughly jammed in the pelvis. There were no labour pains. I could not get a catheter into the bladder until chloroform had been given to complete insensibility, when with a good deal of difficulty a male elastic instrument was introduced and about a pint of urine drawn off. With my right hand I succeeded after great delay in seizing the right foot, which was at the fundus, an attempt to bend and hook down the knee having failed. Having turned and delivered, the uterus contracted well, and the placenta was found in the vagina. The woman was tightly bandaged, a drachm of fluid extract of ergot administered, and hot bottles packed round her. Next day she was reported as well, and ten days later she was about her house.

In another case to which I was called a few days later I found the woman dead, and the bed and floor covered with blood. I was told that an arm had been presenting for two days and a half, and that the midwife after I was sent for had cut away the arm as high as she could reach. Profuse hæmorrhage occurred immediately, which was speedily fatal. The midwife thereupon fled, carrying the arm with her. I was not allowed to make any examination. The people in the house told me that the blood that flowed from the patient was black and ran away like water out of a bucket. The knife had doubtless plunged into a mass of enlarged vaginal veins.

As something worth knowing by medical men in China who in the hot weather find their pocket cases not only heavy to carry but soon filling with rusty instruments, I would draw attention to SALT & Son’s excellent little case in aluminium, which contains all that is commonly necessary, and is so small as to be easily carried in the waistcoat pocket. All through last summer I used the case which this firm at first introduced, and in ordinary work had seldom need for anything not contained in it, while the steel instruments, effectually protected from the vapour of the body, remained unspecked by rust. This case has lately been improved upon, and without any material increase in size, is made to hold a very complete set of clinical, dressing, and minor operating instruments.

* See *Customs Medical Reports*, iii., 82; xiv., 45; xv., 7.

F.—Dr. IRWIN's Report on the Health of Tientsin for the Year ended
31st March 1879.

DURING the first three months of this period residents, both native and foreign, in Tientsin suffered severely. An epidemic of typhus fever affected both classes. Small-pox was also present, and a number of lung affections came under treatment. The latter were due to the sudden changes of temperature at this season, with the frequent dust-storms filling the air with irritating particles, and rendering all those whose occupations involve exposure particularly liable to attacks. The causes of the outbreak of typhus are not hard to find, in fact everything pointed to its certain appearance. We had a famine-stricken population of refugees from the adjacent provinces filling the city and neighbouring villages. The physical condition of the refugees was the worst possible. They had suffered for months from scarcity of food, from the bad quality of what they did obtain, from insufficient clothing, over-crowding, dirt, along with a rigorous winter, all together producing intense mental depression, and acting as exciting causes, as soon as they were exposed to the typhus contagion. The poor were quickly struck down, and the mortality from starvation and fever combined must have been enormous. It is believed by the Chinese, that of the 80,000 people that received shelter during the winter of 1877-78, barely 10,000 were alive at the end of May. The streets were filled with the sick and starving. I was very frequently in the city during this time, and I never met with less than two or three dead bodies in the street. On one occasion I counted seven on my way from the settlement to the city and back through the plain. The bodies lay sometimes for two days before they were buried by the authorities, and they were then cased in matting and lightly covered with earth, never placed deep in the ground. Funerals were constantly passing. In the river Peiho bodies were continually floating down, and 33 were picked up at the lower ferry during the last week in March.

There were 45 cases of typhus treated. Of these—

8	were Resident Foreign Adults.
4	„ „ „ Children.
6	„ Non-resident Foreign Adults.
27	„ Natives, of whom there were 25 Adults.

In most of the cases the onset of the fever was sudden, the patient complaining of chilliness, nausea, hot skin, and a desire to lie down. There was great loss of muscular power from the first. In one case the typhus rash appeared on the evening of the 4th day from the time of first feeling of chilliness and weakness, in 4 cases on the 5th day, and in 2 on the 8th; in the other cases I could get no reliable information as to the commencement of the fever. In the 4 children's cases, the rash was very faint, and I cannot describe it better than in the words of Dr. J. BUCHANAN: "A faint irregular mottling, dusky red and fine, as if below the surface of the skin, and seen through a semi-opaque medium;" it was most marked on the inside of the thighs and on the axillary margins and buttocks. In the children's cases the treatment adopted was very simple. Chlorate of potash, in quantities of from one to two drachms through the 24 hours, was the only

drug given. The skin was sponged with tepid water and vinegar whenever the thermometer marked 102°.5 F. This invariably gave relief, reducing the temperature by one or two degrees at the time, and often inducing sleep. In only one child were the symptoms alarming. Here brandy and egg mixture was given with benefit, to the amount of 2 oz. of brandy in the 24 hours. Constipation was relieved by castor oil enemata. In the adult cases the mulberry eruption and subcuticular mottling were well marked, in some of the worst cases the mulberry rash completely covering the skin. The peculiar typhus odour was very apparent. The treatment adopted in these cases was free ventilation, with a liberal use of chloride of zinc and carbolic acid as disinfectants, and nourishment in a concentrated liquid form administered every 3rd or 4th hour. Most of the cases required early stimulation.

In one with a pulse ranging between 40 and 50 on the 8th day of the disease, with delirium, involuntary evacuations and marked stupor, brandy was given to the amount of 26 oz. in divided doses, each day for 6 days. The quantity was then gradually reduced to 4 oz. on the 15th day, and the patient was convalescent on the 20th day.

Of small-pox 5 cases were treated. They were all discrete. No drugs were given except an occasional dose of castor oil. Carbolic acid was freely used as a disinfectant, and in the ratio of 1 to 40 parts of oil as a local application. In no case was there pitting. Four of the cases had marks of previous vaccination. Twenty-six cases of dysentery of a malarious type came under observation. Of these 13 occurred on board vessels. The ipecacuanha treatment was attended with the best results, and I found the root bark of ailanthus most useful in restraining the diarrhoea which is often so troublesome after the dysentery has been subdued. It was prescribed as directed by Dr. DUGAR in the *Customs Medical Reports*, vol. x., 22. Of intermittent fever there were 62 cases, but most of these were of a mild type and readily amenable to treatment.

It was reported that a foreigner died of cholera in a Chinese gunboat lying outside the bar at Taku. Of choleraic diarrhoea 4 cases were treated. Two occurred on the night of the 14th September, and the other two on the 29th of the same month. They were on board ships in the river, and the three vessels on which they occurred were lying immediately one after the other.

During March 1879, most of the children in the settlement suffered from an epidemic catarrhal fever with croupy symptoms. It began on the 8th of the month. After two warm days, cold winds from the N.W. suddenly came on to blow, and on that morning 4 children were seized. On the 12th 5 more were attacked, and on the 22nd and 24th there were 8 fresh cases. The disease was characterized by its sudden onset, great restlessness, severe cough, coryza, dyspnoea and slight bronchitis; it ran its course in from 7 to 10 days, the termination being attended with diarrhoea in some of the cases, and with profuse perspiration in others. The patients were treated with emetics, ipecacuanha and salines. If seen at the very onset, I found aconite of great service in subduing the fever and relieving the intense restlessness. Sinapisms to the chest were required in some few cases. The affection was undoubtedly contagious, as it quickly affected those children that were exposed.

Six cases of sciatica were treated.

One of rheumatic origin, occurring in a gentleman who had suffered a great deal from exposure in Siberia and the north of China, received immediate and permanent relief from salicylate of soda. In another, the origin of which was obscure and which proved very intractable, the only things that gave relief were morphia injections and the continuous current from a 30-cell LECLANCHÉ battery.

Of four cases of typhoid two were contracted in the settlement.

In one case, which terminated fatally, the patient had procured 12 ounces of sulphate of magnesia at one of the outposts, and for three days previous to admission to hospital had taken 2 doses each day, amounting in all to about $5\frac{1}{2}$ oz. When I saw him his pulse was 140, temperature $103^{\circ}2$, breath very offensive, tongue red and glazed. There were four rose-coloured typhoid spots on the abdomen, general tympanites, abdominal tenderness, and gurgling in right iliac fossa. The motions were very frequent, horribly offensive, ochre-coloured, mixed with blood and shreds. He was very prostrate, and slightly delirious. A quantity of blood had been passed during the night. The intestinal hæmorrhage continued at intervals in spite of treatment, and on the 6th day after his admission there were symptoms of perforation. General peritonitis thereupon set in and quickly carried him off.

DEATH RETURN OF FOREIGNERS FOR THE YEAR ENDED 31st MARCH 1879.

Typhus	5	Residents.
Typhoid	1	Non-resident.
Diarrhœa	1	Resident—Infant.
Sunstroke	1	Non-resident.
Cholera	1	„

During the 12 months there were 7 births among the foreign community—4 males and 3 females. The general health of the settlement improved considerably after the heavy autumnal rains; dysentery and diarrhœa ceased, and cases of ague were far less frequent. I attribute the improvement to the marshy grave-dotted plain at the back of the settlement being inundated, and the numerous large pits filled with water. It would make a marked difference in the health of Tientsin if a strip of the barren plain at the back of the settlement along the Taku road were purchased and planted with belts of trees. The land could be procured at a very moderate cost, and the chain of deep excavations which in summer contain filthy stagnant water could easily be kept filled with water from the river. It is absolutely necessary for the health of the community living on the settlement that this should be done. It would also prevent the concession being surrounded by Chinese dwellings on this side, for already several wretched houses have been erected on the waste, and the neglect of all sanitary arrangements on the part of their inhabitants is a source of more than annoyance to passers-by.

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„ **2.**—MEDICAL REPORTS..... First Issue, 1871.
